NJD002325074 13B3

LENOX

September 27, 2005

Mr. Frank Faranca
Case Manager, Bureau of Publicly Funded Site Remediation
New Jersey Department of Environmental Protection
401 E. State Street P.O. Box 028
5th Floor West
Trenton NJ 08625-0028

RE: NJPDES-DGW Permit 0086487 Effective March 1, 2000

Dear Mr. Faranca:

Two copies of the Discharge to Groundwater Report consisting of one (1) T-VWX-014, seven (7) VWX-015 Groundwater Analysis – Monitoring Well reports and report Sections 1.0 through 8.0 for the July through September 2005 quarter are enclosed.

Detection Monitoring was performed in accordance with Part 4-DGW Table 2, using the Ground Water Sampling and Analysis Plan approved in April 1996.

Lenox inspection logs were reviewed and a summary of the logs for the quarter is enclosed.

The "Mann-Whitney U-Test" statistical analysis of the ground water TCE results from the five (5) sentinel wells over eight (8) sampling quarters was rolled forward twenty-four (24) quarters to cover the July 2005 data and is included in section 7 of the report. The null-hypothesis is accepted for sentinel wells MW-75, MW-76, MW-77, MW-78 and MW-79A and we cannot statistically conclude that the TCE concentrations are decreasing for the twenty-fourth (24th) quarter's data set. In addition, MW-75 has been non-detect for the past twenty-four (24) consecutive quarters.

The **bold** data in the tables denotes elevated results, which exceed the site-specific GWQC's for lead (10ug/l) and zinc (36.7 ug/l) as determined by calculating their arithmetic means from data reported in a 3-year study. Trichloroethylene levels are compared to the New Jersey limit of 1.0 ppb. Please note:

- MW-3 and MW-4 showed elevated levels of total and dissolved lead. No other wells showed elevated levels of either total or disolved lead.
- MW-3, MW-4, MW-15, MW-25, and B-31 showed elevated levels of both total and dissolved zinc, while MW-81 showed elevated levels of total zinc but not dissolved zinc;

651293

LENOX TECHNICAL SERVICES, TILTON ROAD, POMONA, NJ 08240 TEL. 609-965-8260 FAX 609-965-8282

Re: NJPDES-DGW Permit 0086487 Effective March 1, 2000

- Of the seventeen (17) wells sampled for TCE this quarter, three (3) wells, MW-10, MW-77 and MW-78 were higher than the last time they were sampled. Nine (9) wells decreased: MW-12S, MW-12D, MW-15, MW-25, B-31, B-59, B-76, MW-79A and MW-81. Five (5) wells: MW-1, MW-13, MW-14D, MW-75 and MW-80 remained essentially the same;
- TCE was elevated in three (3) of the five (5) downgradient sentinel wells, MW-77, MW-78 and MW-79A at 1.9, 2.3 and 4.0-ug/L, respectively. [MW-79A decreased slightly from 5.5-ug/L.]
- The volatile organic compound cis-1, 2-dichloroethene was detected in five (5) wells: 0MW-10, MW-12D, MW-77, MW-78 and MW-79A. Trans-1,2-dichloroethene was detected in MW-79A. TCE daughter species were not detected in any other wells;
- The Monthly Daily Average Flows for the quarter were _348,557-gallons per day for June 2005, _350,739-gallons per day for July 2005 and _379,777-gallons per day for August 2005;
- GAC Treatment System influent and effluent unfiltered water samples contained elevated total zinc at 59.1-ug/L, and 343-ug/L respectively. The filtered influent, mid and effluent water samples contained elevated zinc at 62.6-ug/L, 41.3-ug/L and 331-ug/L - respectively. The zinc is attributed to the higher zinc levels observed in B-31 and, previously, other wells. ;
- No TCE daughter compounds were detected in the GAC Treatment System influent, mid or effluent water samples;
- Lead was detected, at less than an elevated level, in the GAC Treatment System, unfiltered mid and effluent water samples and in the filtered influent and effluent water samples;
- TCE and cis-1, 2-dichloroethene were detected below the New Jersey MCL's of 1.0 ug/l in only one (1) of the three (3) residential, downgradient wells sampled, RESW-1.

Please call (609) 965-8272 if there are any questions.

Sincerely,

John F. Kinkela

John F. Kinkela
Director of Environmental Engineering

Enclosures -Pomona DGW and TCE Quarterly Groundwater Monitoring Report – July 2005 Monitoring Round
-Summary of Inspection Logs – July through September 2005 Quarter

bcc: J.H. Ennis (w/attachments)
L.A. Fantin, Lenox (w/attachments)
Shane Nelson (w/attachments)
File

NE W JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Form T-VWX-14

MONITORING REPORT - TRANSMITTAL SHEET

NJPDES No. 0 0 8 6 4 8 7

REPORTING PERIOD MO YR 0 7 0 5 thru MO YR 0 9 0 5

PERMITEE: Name LENOX INCORPORATED
Address 100 LENOX DRIVE
LAWRENCEVILLE, NEW JERSEY 08648

FACILITY: Name LENOX CHINA, A DIVISION OF LENOX INCORPORATED
Address TILTON ROAD
POMONA, NEW JERSEY 08240 (County) ATLANTIC
Telephone (609) 965-8272

FORMS ATTACHED ***(Indicate Quantity of Each)***

SLUDGE REPORTS - SANITARY

☐ T-VWX-007 ☐ T-VWX-008 ☐ T-VWX-009

SLUDGE REPORTS - INDUSTRIAL

☐ T-VWX-010A ☐ T-VWX-010B

WASTEWATER REPORTS

☐ T-VWX-011 ☐ T-VWX-012 ☐ T-VWX-013A

GROUNDWATER REPORT *(As per permit)*

☒ 7 VWX-015 ☐ VWX-016 ☐ VWX-017

NJPDES DISCHARGE MONITORING REPORT

☐ EPA FORM 3320-01

OPERATING EXCEPTIONS

	YES	NO
DYE TESTING	☐	☐
TEMPORARY BYPASSING	☐	☐
DISINFECTION INTERRUPTION	☐	☐
MONITORING MALFUNCTIONS	☐	☐
UNITS OUT OF OPERATION	☐	☐
OTHER	☐	☐

(Detail any "yes" on reverse side in appropriate space.)

AUTHENTICATION - I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment

LICENSED OPERATOR

Name _____

Grade & Registry No. _____

Signature _____

PRINCIPAL EXECUTIVE OFFICER or DULY AUTHORIZED REPRESENTATIVE

Name JOHN F. KINKELA

Title DIR. OF ENVIRONMENTAL ENGINEERING

Signature John F. Kinkela

SUMMARY OF INSPECTION LOGS

Quarter July 2005 – September 2005

Facility: Glaze Basin Cap **Type:** Asphalt Paving

Inspections: Monthly **Required:** Monthly

Repairs/Maintenance: NA

Condition: Excellent condition

Remarks: Repaved

Facility: Slip Mound Cap **Type:** Membrane with soil and vegetative cover - mounded

Inspections: Monthly **Required:** Monthly

Repairs/Maintenance: None

Condition: Vegetative cover is in good condition and no erosion was noted. Protective guard rail in good condition.

Remarks: **None.**

Facility: Nine (9) RCRA Monitoring Wells **Type:** N/A

Inspections: Monthly **Required:** Monthly

Repairs/Maintenance: None

Condition: All wells intact and secure.

Remarks: **Sampled MW's 1, 3, 4, 6, 9 and 10 in July**

SUMMARY OF INSPECTION LOGS

Quarter July 2005 – September 2005

Facility: Seven (7) Recovery Wells **Type:** N/A

Inspections: Monthly **Required:** Monthly

Repairs/Maintenance: None

Condition: All wells intact and secure. RW-1, not in use.

Remarks: Installed two (2) new recovery wells RW-8 and RW-9, sampled in August.

Facility: Polishing Basin **Type:** N/A - Closed

Inspections: **Monthly** **Required:** **Monthly**

Repairs/Maintenance: N/A

Condition: Clean closed. Vegetative cover is in place, no erosion noted.

Remarks: **None.**

Facility: Tilton Pond **Type:** Earth Dike, Unlined

Inspections: One time per day **Required:** Monthly

Repairs/Maintenance: SWMU closure delayed until Summer 2006 due to high groundwater. Current groundwater levels are still high.

Condition: Vegetative cover on berms is in good condition and no erosion was noted. No industrial waste discharge to pond since August 1992. No overtopping controls required as pond is permitted to discharge non-contact cooling water and stormwater to surface water under NJPDES-DSW Permit #0005177.

Remarks: As industrial wastewater no longer flows through pond, final cleaning and sampling are planned, when groundwater is low, to effect clean closure.

SUMMARY OF INSPECTION LOGS

Quarter July 2005 – September 2005

Facility: Sludge Disposal Area **Type:** Asphalt Paving

Inspections: Monthly **Required:** No

Repairs/Maintenance: None.

Condition: Asphalt and fence in excellent condition.

Remarks: None

Facility: Area of Concern **Type:** Asphalt Paving, Membrane Cap & Fence

Inspections: Monthly **Required:** No

Repairs/Maintenance: None.

Condition: Asphalt and fence in excellent condition.

Remarks: None

Prepared by: John F. Kimberly

Date: 09/27/05

C:\WPDATA\JFK\LTRS\DGW\INSP.LOG

Gannett Fleming

LENOX CHINA

A DIVISION OF LENOX, INC.

POMONA, NEW JERSEY

POMONA DGW AND TCE QUARTERLY GROUNDWATER MONITORING REPORT JULY 2005 MONITORING ROUND

PROJECT #43838.020/021

SEPTEMBER 2005

Office Location:

GANNETT FLEMING

202 Wall Street

Princeton, New Jersey 08540

Office Contacts:

James M. Barish, CPG

Robyn Myhre

(609) 279-9140

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FIGURES

APPENDICES

1.0 INTRODUCTION

This report summarizes the results of the groundwater monitoring programs that satisfy the requirements outlined in Lenox's NJPDES Discharge to Groundwater (DGW) permit (permit number NJ0086487) and the Memorandum of Agreement (MOA) between Lenox and NJDEP. All groundwater monitoring and analytical procedures were conducted in accordance with the protocols outlined in the most recently revised Groundwater Sampling and Analysis Plan (GWSAP) and Supplemental Groundwater Sampling and Analysis Plan (SGWSAP) approved by NJDEP.

This report presents the DGW and MOA sampling program data in a single document. The report components are as follows:

- Detection Monitoring Program
- GAC Treatment System Monitoring Program
- Depth to Water and Water Level Elevation Measurements
- TCE Monitoring Program
- SWMU No. 2 and Area of Concern Monitoring Program
- Classification Exception Area/Statistical Analysis Program
- Residential Well Sampling

The first three items satisfy the DGW permit monitoring requirements while the remaining items fulfill the requirements of the MOA.

2.0 DETECTION MONITORING PROGRAM (DGW)

The quarterly detection monitoring program is covered by the GWSAP and consists of the following for the third quarter:

- Sample monitoring wells MW-1, MW-3, MW-4, MW-6, MW-9 and MW-10.
- All samples are analyzed for color and total and dissolved lead and zinc. Samples from MW-1 and MW-10 are also analyzed for total and dissolved iron, total dissolved solids (TDS), total suspended solids (TSS) and volatile organic compounds (VOCs).
- Specific conductivity, pH, temperature and dissolved oxygen are measured in the field during purging and prior to sample collection.

Table 1, Section 2 summarizes the results of the current sampling event. The full laboratory data report is provided in Appendix C. Tables 2 through 7 summarize historical sampling results for each well since 1998.

The July 2005 monitoring results are summarized below:

- Total lead concentrations ranged from less than the laboratory reporting limit of 3.0 micrograms per liter (µg/l) to 27.9 µg/l, with the highest concentration in the sample from MW-3. Dissolved lead concentrations ranged from less than the laboratory reporting limit of 3.0 µg/l to 24.3 µg/l, with the highest concentration in the sample from MW-3.

- Total zinc concentrations ranged from less than the laboratory reporting limit of 20 µg/l to 3,570 µg/l, with the highest concentration in the sample from MW-3. Dissolved zinc concentrations ranged from less than the laboratory reporting limit of 20 µg/l to 3,590 µg/l, with the highest concentration also in the sample from MW-3.

- Samples from wells MW-1 and MW-10 were analyzed for iron. Total iron was detected at a concentration of 750 µg/l in MW-1. Total iron was not detected in the sample from MW-10 at a concentration exceeding the 100 µg/l laboratory reporting limit. Dissolved

iron was not detected in either sample at concentrations exceeding the 100 µg/l laboratory reporting limit.

- TDS concentrations were 93 milligrams per liter (mg/l) in the sample from MW-1 and 260 mg/l in the sample from MW-10. TSS concentrations were less than the laboratory reporting limit of 4.0 mg/l in the samples from both MW-1 and MW-10.

- Color concentrations ranged from less than the laboratory reporting limit of 5 color units to 30 color units. The highest concentration was detected in the sample from MW-1.

- There was good agreement between analyte concentrations in the field (MW-10) and duplicate (MW-2) samples.

- No analytes were detected in the field or trip blank samples at concentrations exceeding their respective laboratory reporting limits.

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POMONA, NEW JERSEY

TABLE 1 SECTION 2

GROUNDWATER QUALITY DATA - JULY 18, 2005

Parameter	Units	MW-1	MW-3	MW-4	MW-6	MW-9	MW-10	MW-2 (MW-10 Dup)	FB	TB
pH, Field	pH units	5.03	5.76	5.57	4.27	5.84	5.35	5.35	-	-
Specific Conductance	ms	0.075	0.45	0.186	0.16	0.231	0.297	0.297	-	-
Oxygen, Dissolved	mg/l	6.00	3.20	5.10	4.70	2.20	2.30	2.30	-	-
Temperature, Field	°C	14.9	20.9	20.9	15.2	16.3	16.6	16.6	-	-
Total Suspended Solids	mg/l	<4.0	-	-	-	-	<4.0	<4.0	<4.0	-
Total Dissolved Solids	mg/l	93	-	-	-	-	260	262	<10	-
Ammonia-Nitrogen	mg/l	-	-	-	-	-	-	-	-	-
Color	CU units	30	25	5	5	5	5	5	<5	-
Sulfate	mg/l	-	-	-	-	-	-	-	-	-
Iron, Dissolved	µg/l	<100	-	-	-	-	<100	<100	<100	-
Lead, Dissolved	µg/l	<3.0	**24.3**	**10.5**	<3.0	<3.0	<3.0	<3.0	<3.0	-
Sodium, Dissolved	µg/l	-	-	-	-	-	-	-	-	-
Zinc, Dissolved	µg/l	<20	**3,590**	**40.9**	<20	<20	<20	<20	<20	-
Iron, Total	µg/l	750	-	-	-	-	<100	<100	<100	-
Lead, Total	µg/l	<3.0	**27.9**	**21.2**	<3.0	<3.0	<3.0	<3.0	<3.0	-
Sodium, Total	µg/l	-	-	-	-	-	-	-	-	-
Zinc, Total	µg/l	<20	**3,570**	**43.2**	<20	<20	<20	<20	<20	-
Volatile Organic Compounds										
1,1-Dichloroethene	µg/l	<0.49	-	-	-	-	<0.49	<0.49	<0.49	<0.49
Cis-1,2-Dichloroethene	µg/l	<0.17	-	-	-	-	0.81J	0.87J	<0.17	<0.17
Trans-1,2-Dichloroethene	µg/l	<0.28	-	-	-	-	<0.28	<0.28	<0.28	<0.28
Methylene Chloride	µg/l	<0.22	-	-	-	-	<0.22	<0.22	<0.22	<0.22
Trichloroethene (TCE)	µg/l	<0.15	-	-	-	-	**5.6**	**5.5**	<0.15	<0.15
Vinyl Chloride	µg/l	<0.13	-	-	-	-	<0.13	<0.13	<0.13	<0.13
Sum of Volatile Organic Compounds	µg/l	<0.72	-	-	-	-	6.97	6.93	<0.72	<0.72

Notes:
- = Not Analyzed < = Not Detected J = Estimated Value
Values in **bold** font exceed the site specific Groundwater Quality Criteria for Lead (10 µg/l), Zinc (36.7 µg/l) or TCE (1.0 µg/l).

3.0 GAC TREATMENT SYSTEM MONITORING PROGRAM (DGW)

Groundwater samples from the GAC unit influent, mid-point, and effluent sampling ports were analyzed for TCE and its breakdown products (1,1-DCE, cis/trans 1,2-DCE, and vinyl chloride), total and dissolved iron, lead, and zinc, TDS, and TSS. The analytical results are summarized in Table 1, Section 3.

The July 2005 GAC monitoring results are summarized below:

- The GAC influent sample contained TCE at a concentration of 4.8 µg/l. The midpoint and effluent samples did not contain TCE at concentrations exceeding the 0.50 µg/l laboratory reporting limit.

- 1,1-Dichloroethene, cis-1,2,-dichloroethene, trans-1,2-dichloroethene and vinyl chloride were not detected in the influent, mid-point or effluent samples at concentrations greater than their respective laboratory reporting limits.

- Lead concentrations in the unfiltered influent, mid-point and effluent samples were <1.2 µg/l, 1.6 µg/l and 2.4 µg/l, respectively. Lead concentrations in the filtered influent, mid-point and effluent samples were 2.1 µg/l, <1.2 µg/l and 2.3 µg/l, respectively.

- Zinc concentrations in the unfiltered influent, mid-point and effluent samples were 59.1 µg/l, 23.3 µg/l and 343 µg/l, respectively. Zinc concentrations in the filtered samples were 62.6 µg/l, 41.3 µg/l and 331 µg/l, respectively.

- Iron concentrations in the unfiltered influent, mid-point and effluent samples were 314 µg/l, 43.3 µg/l and 119 µg/l, respectively. Iron concentrations in the filtered samples were 147 µg/l, 43.8 µg/l and 61.1 µg/l, respectively.

- TDS concentrations in the influent, mid-point and effluent samples were 167 mg/l, 138 mg/l and 141 mg/l, respectively.

- TSS concentrations in the influent, mid-point and effluent samples were all less than the laboratory reporting limit of 10 mg/l.

LENOX CHINA FACILITY AND ADJACENT AREA
POMONA, NEW JERSEY

TABLE 1 SECTION 3

GAC TREATMENT SYSTEM SAMPLING RESULTS, JULY 14, 2005

Sample ID Sample Date	Permit Limits	PO-GAC-INF 7/14/2005	PO-GAC-MID 7/14/2005	PO-GAC-EFF 7/14/2005	Percent Removal
Volatile Organic Compounds (µg/l)					
Trichloroethene (TCE)	1.0	**4.8** ✓	<0.5 ✓	<0.5 ✓	95.0%
1,1-Dichloroethene	2.0	<0.5 ✓	<0.5 ✓	<0.5 ✓	NA
cis-1,2-Dichloroethene	2.0	<0.5 ✓	<0.5 ✓	<0.5 ✓	NA
trans-1,2-Dichloroethene	2.0	<0.5 ✓	<0.5 ✓	<0.5 ✓	NA
Vinyl chloride	5.0	<0.5 ✓	<0.5 ✓	<0.5 ✓	NA
Metals (µg/l)					
Iron (Unfiltered)	NL	314 ✓	43.3 ✓	119 ✓	NA
Iron (Filtered)	NL	147 ✓	43.8 ✓	61.1 ✓	NA
Lead (Unfiltered)	NL	<1.2 ✓	1.6 ✓	2.4 ✓	NA
Lead (Filtered)	NL	2.1 ✓	<1.2 ✓	2.3 ✓	NA
Zinc (Unfiltered)	NL	59.1 ✓	23.3 ✓	343 ✓	NA
Zinc (Filtered)	NL	62.6 ✓	41.3 ✓	331 ✓	NA
TDS (mg/l)	NL	167 ✓	138 ✓	141 ✓	NA
TSS (mg/l)	NL	<10 ✓	<10 ✓	<10 ✓	NA

Notes:
µg/l - Micrograms per liter
mg/l - Milligrams per liter
NL - No limit
NA - Not applicable
* - Results less than the laboratory minimum detection limit were considered to be one half the minimum detection limit
Values in **bold** exceed the site specific Groundwater Quality Criteria of 1.0 µg/l for TCE.

4.0 DEPTH TO WATER, WATER LEVEL ELEVATIONS, AND TREATMENT SYSTEM FLOW MONITORING (DGW)

4.1 Depth to Water and Water Level Elevations

The July 18, 2005 depth to water and water level elevation data is summarized in Table 1, Section 4. Depths to water in the wells on the south and north sides of the plant that screen the same interval as the recovery wells were used to develop the water level elevation and groundwater flow map (Figure 1). As shown in Figure 1, the groundwater flow direction is to the northeast, which is consistent with previous measurements.

The depth to water measurements in the well points installed downgradient of the recovery wells were plotted to develop the water level elevation and groundwater flow direction maps shown in Figures 2 and 3.

4.2 Treatment System Flow Monitoring

In a letter to Lenox dated April 18, 2000, NJDEP requested that Lenox propose an "Average Daily Volume" (ADV) that would represent the minimum pumping volume required to adequately capture the TCE plume. The ADV would be calculated by dividing the total volume of groundwater extracted by the recovery system each month by the number of days in the month and would be reported quarterly to NJDEP. In a letter to NJDEP dated May 19, 2000, Lenox proposed an ADV of 268,000 gallons per day, which was based on the results of groundwater modeling and the empirical water level and groundwater chemistry data developed since the recovery system started in 1991.

During the period June 1 through June 30, 2005, the calculated ADV was 348,557 gallons per day. During the period July 1 through July 31, 2005, the calculated ADV was 350,739 gallons per day. During the period August 1 through August 31, 2005, the calculated ADV was 379,777 gallons per day.

LENOX CHINA FACILITY AND ADJACENT AREA
POMONA, NEW JERSEY

TABLE 1 SECTION 4

WATER LEVEL MEASUREMENTS, JULY 18, 2005

Well No.	Measuring Point Elevation (ft. above mean sea level)	Depth to Water (ft. below MP)	Water Level Elevation (ft. above mean sea level)
P1	65.69	7.75	57.94
P1A	66.32	7.97	58.35
P1B	66.34	8.04	58.30
P5	66.74	7.38	59.36
P5A	66.74	8.81	57.93
P8A	70.02	11.61	58.41
P8B	70.07	10.17	59.90
P9A	70.90	13.04	57.86
P9B	70.97	12.90	58.07
P9C	71.31	13.06	58.25
MW1	69.28	11.07	58.21
MW3	67.09	9.87	57.22
MW4	66.98	7.41	59.57
MW5	64.17	9.34	54.83
MW6	65.08	8.86	56.22
MW7	67.31	10.64	56.67
MW8	67.16	9.55	57.61
MW9	69.51	12.96	56.55
MW10	63.51	7.44	56.07
MW11	63.05	8.05	55.00
MW12D	62.89	7.56	55.33
MW12S	62.62	7.33	55.29
MW13	64.66	9.08	55.58
MW14D	63.63	7.94	55.69
MW14S	63.64	7.94	55.70
MW15	66.07	9.50	56.57
MW16	62.07	7.22	54.85
MW17	62.09	7.07	55.02
MW23	61.49	6.91	54.58
MW23A	61.78	7.28	54.50
MW24	62.60	7.90	54.70
MW25	61.13	6.68	54.45
MW25A	61.29	6.82	54.47
MW25B	61.22	6.73	54.49
MW26A (B30A)	62.48	7.14	55.34
MW26B (B30B)	61.65	7.32	54.33
MW72	64.19	7.65	56.54
MW73	63.06	6.76	56.30
MW74	62.56	6.82	55.74
MW75	60.15	5.86	54.29
MW76	60.60	6.46	54.14
MW77	60.41	6.23	54.18
MW78	59.84	5.58	54.26
MW79A	60.51	6.04	54.47
MW80	62.49	6.81	55.68
MW81	61.90	7.03	54.87
B31	62.19	8.17	54.02
B32	63.29	8.91	54.38
B53	62.31	7.18	55.13
B54	62.39	7.21	55.18
B59	60.02	6.06	53.96
B66	61.71	7.70	54.01
B66A	61.60	7.41	54.19
B66B	61.86	7.65	54.21
B67	62.29	8.27	54.02
B70A	61.39	6.82	54.57
B71	62.31	8.35	53.96
PZ1S	60.27	6.20	54.07
PZ1D	60.52	6.71	53.81
PZ2S	60.52	6.42	54.10
PZ2D	60.70	6.78	53.92
PZ3S	61.47	7.39	54.08
PZ3D	61.60	7.51	54.09
PZ4S	60.80	6.65	54.15
PZ4D	61.09	6.99	54.10
PZ5S	60.47	6.19	54.28
PZ5D	60.56	6.36	54.20
PZ6S	60.79	6.56	54.23
PZ6D	60.73	6.52	54.21

5.0 TCE MONITORING PROGRAM (MOA)

5.1 Background

A groundwater investigation performed at the Lenox China facility between January 1987 and February 1990 by Geraghty & Miller (G&M) identified two TCE plumes emanating from an antecedent drum storage pad and degreaser sump. Both antecedent waste handling areas are no longer in use. A second on-site degreaser sump was removed from service in June 1993. Lenox initiated a quarterly groundwater monitoring program to delineate and track the TCE plumes identified by G&M. The monitoring results were also used to design the GWCAS.

5.2 Field Procedures

Groundwater samples were collected from fifteen monitoring wells at the Lenox facility and along White Horse Pike as part of the regularly-scheduled monitoring program on July 18-22, 2005. Samples were collected from two additional wells, MW-12D and MW-14D, for the purpose of analyzing VOC concentrations in the deep water-bearing zone. All sampling was performed in accordance with the most recently revised (April 1996) GWSAP and SGWSAP approved by the NJDEP.

Each well used to monitor the TCE remediation system contains a three-quarter-inch inner-diameter pump column attached to a one-foot section of well screen. The bottom of the pump column screen is set approximately two feet above the top of the well screen to ensure that the total volume of standing water in the well casing is removed during purging. To purge the wells, a peristaltic pump was attached to the top of the pump column using drinking-water grade polyethylene tubing. Three to five times the volume of standing water in each well was removed and field parameters (pH, specific conductivity, temperature and dissolved oxygen) were monitored during purging. The field parameter data is provided on the well sampling logs in Appendix A. Samples for metals analysis were collected directly from the discharge of the peristaltic pump. A new section of tubing was used for each well to avoid cross-contamination. Samples for VOC analysis were collected with 60 cc Teflon bailers dedicated to each well.

Unfiltered samples were analyzed for VOCs, iron, zinc, lead, TDS and TSS. Filtered samples were analyzed for iron, zinc and lead. MW-12D and MW-14D were analyzed for VOCs only. Field blank and duplicate samples collected during the monitoring program and a trip blank supplied by the laboratory were analyzed for quality assurance purposes. All analyses were performed by Accutest Laboratories, located in Dayton, New Jersey (NJDEP certification No. 12129).

5.3 Groundwater Monitoring Results

The groundwater analytical data is summarized in Tables 1, 2, 3 and 4, Section 5. The extent of TCE in groundwater during the July 2005 monitoring round is shown on Figure 4. The laboratory data reports are provided in Appendix C, which is bound separately.

The July 2005 monitoring results are summarized below:

- For wells sampled on a quarterly basis, TCE concentrations increased in wells MW-10, MW-77 and MW-78 since the last monitoring round. The largest increase occurred in well MW-10 (5.1 µg/l in April 2005 to 5.6 µg/l in July 2005).

- For wells sampled on a quarterly basis, TCE concentrations decreased in wells MW-12S, MW-12D, MW-15, MW-25, B-31, B-59, MW-76, MW-79A and MW-81 since the last monitoring round. The largest decrease occurred in wells B-31 (6.3 µg/l in April 2005 to 4.8 µg/l in July 2005) and MW-79A (5.5 µg/l in April 2005 to 4.0 µg/l in July 2005).

- TCE concentrations remained effectively unchanged at less than the laboratory reporting limit in wells MW-1, MW-13, MW-14D, MW-75 and MW-80.

- Cis-1,2-dichloroethene was detected in the samples from wells MW-10, MW-12D, MW-77, MW-78 and MW-79A at concentrations ranging from 0.81 J µg/l in MW-10 to 1.8 µg/l in MW-79A. Trans-1,2-dichloroethene was detected in the sample from well MW-

79A at a concentration of 0.40 J µg/l. No other TCE breakdown products were detected above laboratory reporting limits in any samples.

- Iron was detected in the unfiltered samples at concentrations ranging from less than the laboratory reporting limit of 100 µg/l to 763 µg/l, with the highest concentration detected in the sample from MW-75. Iron was not detected in any of the filtered samples above the laboratory reporting limit of 100 µg/l.

- Lead was detected in the unfiltered samples at concentrations ranging from less than the laboratory reporting limit of 3.0 µg/l to 8.8 µg/l, with the highest concentration detected in the sample from MW-85, the QAQC duplicate of MW-75. Lead was detected in the filtered samples from MW-15 (4.8 µg/l) and MW-81 (5.4 µg/l). No other filtered samples contained lead at concentrations exceeding the laboratory reporting limit of 3.0 µg/l

- Zinc was detected in the unfiltered samples at concentrations ranging from less than the laboratory reporting limit of 20 µg/l to 113 µg/l, with the highest concentration detected in the sample from MW-25. Zinc was detected in the filtered samples at concentrations ranging from less than the laboratory reporting limit of 20 µg/l to 116 µg/l, with the highest concentration also detected in the sample from MW-25.

- TDS concentrations ranged from 33 mg/l (MW-75) to 260 mg/l (MW-10). TSS concentrations ranged from less than the laboratory reporting limit of 4.0 mg/l to 16.0, which was detected in the sample from well MW-78.

- There was good agreement between analyte concentrations in the field and duplicate samples (MW-85) from well MW-75.

- TCE, iron, lead, zinc, TDS and TSS were not detected in the field blank samples at concentrations exceeding their respective laboratory reporting limits. No VOCs were detected in the trip blanks at concentrations exceeding laboratory reporting limits.

- Chloroform was detected in the samples from a number of wells, at concentrations ranging from 0.35 J µg/l (B-31) to 3.8 µg/l (MW-81). Chloroform was not detected in the field or trip blanks and is not considered a site-related compound.

The monitoring data indicates that since the last monitoring round, TCE concentrations in samples from the sentinel wells along White Horse Pike increased in wells MW-77 and MW-78, decreased in wells MW-76 and MW-79A, and remained the same in well MW-75 at less than the laboratory reporting limit. The greatest change in concentration occurred at well MW-79A, which decreased from 5.5 µg/l in April 2005 to 4.0 µg/l in July 2005.

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TABLE 1 SECTION 5

SUMMARY OF TCE CONCENTRATIONS IN GROUNDWATER - OCTOBER 2002 THROUGH JULY 2005

Well	Apr. 27-29, 2004	Jul. 22-26, 2004	Oct. 18-20, 2004	Jan. 19-21, 2005	April 19-21, 2005	July 18-22, 2005
MW1	<0.19	<0.20	<0.20	<0.20	<0.20	<0.15
MW10	**3.9**	**6.9**	**7.0**	**5.3**	**5.1**	**5.6**
MW12S	**1.1**	**1.0**	0.86 J	**1.1**	**1.2**	**1.0**
MW12D	**5.4**	-	**6.9**	**6.7**	**7.0**	**6.4**
MW13	<0.19	<0.20	<0.20	<0.20	<0.20	<0.15
MW-14D	-	-	<0.20	<0.20	<0.20	<0.15
MW15	0.69 J	0.46 J	<0.20	0.88 J	0.64 J	<0.15
MW23	**8.9**	-	-	-	**7.9**	-
MW25	0.39 J	<0.20	<0.20	<0.20	0.41 J	<0.15
B31 (MW27)	**8.5**	**7.7**	**7.7**	**5.6**	**6.3**	**4.8**
B32 (MW28)	**8.5**	-	-	-	**5.3**	-
B53	**6.7**	-	-	-	**4.4**	-
B54	**117**	-	-	-	**88.3**	-
B59	0.46 J	0.40 J	<0.20	<0.20	0.61 J	<0.15
B66	**6.3**	-	-	-	**35.8**	-
B71	**2.8**	-	-	-	**1.2**	-
MW75	<0.19/<0.19	<0.20/<0.20	<0.20/<0.20	<0.20/<0.20	<0.20/<0.20	<0.15/<0.15
MW76	0.30 J	0.27 J	<0.20	0.36 J	0.41 J	<0.15
MW77	**1.3**	**1.5**	**1.8**	**1.9**	**1.8**	**1.9**
MW78	**1.2**	**1.6**	**1.8**	**2.0**	**2.2**	**2.3**
MW79A	**5.2**	**5.4**	**5.8**	**7.0**	**5.5**	**4.0**
MW80	<0.19	<0.20	<0.20	<0.20	<0.20	<0.15
MW81	0.27 J	<0.20	<0.20	<0.20	0.33 J	<0.15
GAC Influent	**5.9**	**6.1**	**4.9**	**4.4**	**4.7**	**4.8**
GAC Effluent	<0.5	<0.5	<0.5	0.6	<0.5	<0.5
GAC Mid-Vessel	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

All samples analyzed by USEPA Method 624, 601 or 502.2/524.2.

All concentrations are presented in micrograms per liter (ug/l).

- = Not analyzed J = Estimated concentration

Values in **bold** font exceed the site specific Groundwater Quality Criteria for TCE (1.0 ug/l).

Table 1, Section 5 Continued...

Well	Oct. 15-17, 2002	Jan. 29-30, 2003	Apr. 14-16, 2003	Jul. 22-24, 2003	Oct. 28-30, 2003	Jan. 21-22, 2004
MW1	<0.15	<0.15	<0.19	<0.19	<0.19	<0.19
MW10	**6.8**	**3.9**	<0.19	<0.19	**5.8**	**3.0**
MW12S	**1.7**	**1.6**	<0.19	<0.19	**1.3**	**1.3**
MW12D	-	-	<0.19	-	-	-
MW13	<0.15	<0.15	<0.19	<0.19	<0.19	<0.19
MW15	0.59	**2.2**	**1.3**	-	-	-
MW23	-	-	<0.19	<0.19	0.67 J	0.96 J
MW25	**3.4**	**2.5**	**1.5**	-	-	-
B31 (MW27)	**6.6**	**24.4**	**26.1**	**1.1**	0.86 J	<0.19
B32 (MW28)	-	-	**3.4**	**15.7**	**10.7**	**10.0**
B53	-	-	**10.3**	-	-	-
B54	-	-	**75.4**	-	-	-
B59	<0.15	0.62 J	0.71 J	-	-	-
B66	-	-	**37.7**	0.96 J	<0.19	<0.19
B70A	-	-	-	-	-	-
B71	-	-	**1.2**	-	-	-
MW75	<0.15/<0.15	<0.15/<0.15	<0.19/<0.19	<0.19/<0.19	<0.19/<0.19	<0.19/<0.19
MW76	<0.15	0.39 J	<0.19	<0.19	<0.19	<0.19
MW77	**1.9**	**2.3**	**1.9**	0.67 J	**1.7**	**1.4**
MW78	**1.0**	**1.7**	**1.8**	**1.1**	**1.4**	**1.3**
MW79A	**3.7**	**6.4**	**3.8**	<0.19	**6.0**	**5.4**
MW80	<0.15	<0.15	<0.19	<0.19	<0.19	<0.19
MW81	0.53	0.50 J	<0.19	<0.19	<0.19	<0.19
GAC Influent	**7.6**	**5.6**	**9.91**	**20.22**	**7.6**	**4.5**
GAC Effluent	<0.26	<0.26	<0.26	<0.26	<0.5	<0.5
GAC Mid-Vessel	<0.26	<0.26	0.37	<0.26	<0.5	<0.5

Notes:

All samples analyzed by USEPA Method 624, 601 or 502.2/524.2.

All concentrations are presented in micrograms per liter (ug/l).

- = Not analyzed J = Estimated concentration

Values in **bold** font exceed the site specific Groundwater Quality Criteria for TCE (1.0 ug/l).

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TABLE 2 SECTION 5

TCE AND ASSOCIATED BREAKDOWN PRODUCT CONCENTRATIONS, JULY 18-22, 2005

Well	TCE	cis-DCE	trans-DCE	1,1-DCE	Vinyl Chloride
MW-1	<0.15	<0.17	<0.28	<0.49	<0.13
MW-10	**5.6**	0.81 J	<0.28	<0.49	<0.13
MW-12S	**1.0**	<0.17	<0.28	<0.49	<0.13
MW-12D	**6.4**	1.1	<0.28	<0.49	<0.13
MW-13	<0.15	<0.17	<0.28	<0.49	<0.13
MW-14D	<0.15	<0.17	<0.28	<0.49	<0.13
MW-15	<0.15	<0.17	<0.28	<0.49	<0.13
MW-25	<0.15	<0.17	<0.28	<0.49	<0.13
B-31	**4.8**	<0.17	<0.28	<0.49	<0.13
B-59	<0.15	<0.17	<0.28	<0.49	<0.13
MW-75	<0.15	<0.17	<0.28	<0.49	<0.13
MW-85 (Dup MW-75)	<0.15	<0.17	<0.28	<0.49	<0.13
MW-76	<0.15	<0.17	<0.28	<0.49	<0.13
MW-77	**1.9**	1.3	<0.28	<0.49	<0.13
MW-78	**2.3**	0.85 J	<0.28	<0.49	<0.13
MW-79A	**4.0**	1.8	0.40 J	<0.49	<0.13
MW-80	<0.15	<0.17	<0.28	<0.49	<0.13
MW-81	<0.15	<0.17	<0.28	<0.49	<0.13

Notes:
All concentrations are presented in micrograms per liter (µg/l).
J = Estimated concentration.
Values in **bold** exceed the site specific Groundwater Quality Criteria for TCE (1.0µg/l).

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TABLE 3 SECTION 5

INORGANIC ANALYTE CONCENTRATIONS, JULY 2005

Well No.	MW-1	MW-10	MW-12S	MW-13	MW-15	MW-25	B-31	B-59
Date Sampled	7/18/05	7/18/05	7/21/05	7/21/05	7/21/05	7/21/05	7/21/05	7/21/05
Metals (µg/l)								
Iron (Unfiltered)	750	<100	<100	<100	209	<100	<100	<100
Iron (Filtered)	<100	<100	<100	<100	<100	<100	<100	<100
Lead (Unfiltered)	<3.0	<3.0	3.8	<3.0	5.3	<3.0	<3.0	<3.0
Lead (Filtered)	<3.0	<3.0	<3.0	<3.0	4.8	<3.0	<3.0	<3.0
Zinc (Unfiltered)	<20	<20	<20	<20	**84.8**	**113**	**68.5**	<20
Zinc (Filtered)	<20	<20	<20	31.9	**81.3**	**116**	**67.2**	<20
TDS (mg/l)	93	260	119	95	179	71	78	78
TSS (mg/l)	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0

Notes:
µg/l = Micrograms per liter.
mg/l = Milligrams per liter.
Values in **bold** exceed the site specific Groundwater Quality Criteria for Lead (10 µg/l) or Zinc (36.7 µg/l).

Table 3, Section 5 Continued . . .

Well No.	MW-75	MW-85*	MW-76	MW-77	MW-78	MW-79A	MW-80	MW-81
Date Sampled	7/21/05	7/21/05	7/21/05	7/21/05	7/21/05	7/21/05	7/21/05	7/21/05
Metals (µg/l)								
Iron (Unfiltered)	763 ✓	647 ✓	<100 ✓	<100 ✓	676 ✓	<100 ✓	<100 ✓	<100 ✓
Iron (Filtered)	<100 ✓	<100 ✓	<100 ✓	<100 ✓	<100 ✓	<100 ✓	<100 ✓	<100 ✓
Lead (Unfiltered)	7.8 ✓	8.8 ✓	3.6 ✓	<3.0 ✓	6.7 ✓	3.1 ✓	<3.0 ✓	<3.0 ✓
Lead (Filtered)	<3.0 ✓	<3.0 ✓	<3.0 ✓	<3.0 ✓	<3.0 ✓	<3.0 ✓	<3.0 ✓	5.4 ✓
Zinc (Unfiltered)	<20 ✓	<20 ✓	<20 ✓	<20 ✓	27.8 ✓	<20 ✓	<20 ✓	**52.3** ✓
Zinc (Filtered)	<20 ✓	<20 ✓	<20 ✓	<20 ✓	<20 ✓	<20 ✓	<20 ✓	<20 ✓
TDS (mg/l)	33 ✓	54 ✓	120 ✓	74 ✓	68 ✓	147 ✓	133 ✓	68 ✓
TSS (mg/l)	13 ✓	12 ✓	<4.0 ✓	<4.0 ✓	16 ✓	6 ✓	<4.0 ✓	<4.0 ✓

Notes:

* MW-85 is duplicate of MW-75.

µg/l = Micrograms per liter.

mg/l = Milligrams per liter.

Values in **bold** exceed the site specific Groundwater Quality Criteria for Lead (10 µg/l) or Zinc (36.7 µg/l).

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TABLE 4 SECTION 5

QUALITY ASSURANCE/QUALITY CONTROL SAMPLES, JULY 18-22, 2005

Sample ID Sample Matrix Date	FB Field Blank 7/18/2005	FB-1 Field Blank 7/21/2005	FB-2 Field Blank 7/22/2005	TB Trip Blank 7/18/2005	TB-1 Trip Blank 7/22/2005
Trichloroethene	<0.15	<0.15	<0.15	<0.15	<0.15
Iron (Unfiltered)	<100	<100	<100	-	-
Iron (Filtered)	<100	<100	<100	-	-
Lead (Unfiltered)	<3.0	<3.0	<3.0	-	-
Lead (Filtered)	<3.0	<3.0	<3.0	-	-
Zinc (Unfiltered)	<20	<20	<20	-	-
Zinc (Filtered)	<20	<20	<20	-	-
TDS (mg/l)	<10	<10	<10	-	-
TSS (mg/l)	<4.0	<4.0	<4.0	-	-

Notes:
All concentrations presented in micrograms per liter (µg/l), unless otherwise noted.
mg/l = Milligrams per liter.
- = Not Analyzed

6.0 SOLID WASTE MANAGEMENT UNIT NO. 2 AND AREA OF CONCERN GROUNDWATER MONITORING PROGRAM (MOA)

The groundwater sampling data from monitoring wells MW-10, MW-17, MW-72, MW-73 and MW-74 are used to assess groundwater quality downgradient of Solid Waste Management Unit (SWMU) No. 2 and the Area of Concern (AOC). Unfiltered and filtered samples from these wells were analyzed for lead and zinc. The groundwater analytical data is summarized in Table 1, Section 6. The laboratory data reports are included in Appendix C.

The July 2005 monitoring results are summarized below:

- Lead was detected in the unfiltered samples at concentrations ranging from less than the laboratory reporting limit of 3.0 to 26.2 µg/l, with the highest concentration detected in the sample from MW-73. Lead was detected in the filtered samples at concentrations ranging from less than the laboratory reporting limit of 3.0 to 7.3 µg/l, with the highest concentration detected in the sample from MW-73.

- Zinc was detected in the unfiltered samples at concentrations ranging from less than the laboratory reporting limit of 20 to 108 µg/l, with the highest concentration detected in the sample from MW-17. Zinc was detected in the filtered samples at concentrations ranging from less than the laboratory reporting limit of 20 to 106 µg/l, with the highest concentration detected in the sample from MW-17.

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TABLE 1 SECTION 6

SWMU NO. 2 AND AOC GROUNDWATER MONITORING RESULTS, JULY 2005

Well No.	MW-10	MW-17	MW-72	MW-73	MW-74
Date Sampled	7/18/05	7/21/05	7/22/05	7/22/05	7/22/05
Lead (Unfiltered)	<3.0	<3.0	9.1	**26.2**	**15.7**
Lead (Filtered)	<3.0	<3.0	3.5	7.3	<3.0
Zinc (Unfiltered)	<20	**108**	<20	**70.7**	**58.5**
Zinc (Filtered)	<20	**106**	<20	**42.3**	26.3

Notes:
All concentrations presented in micrograms per liter (µg/l).
Values in **bold** exceed the site specific Groundwater Quality Criteria for Lead (10 µg/l) and Zinc (36.7 µg/l).

7.0 CLASSIFICATION EXCEPTION AREA/ STATISTICAL ANALYSIS PROGRAM (MOA)

The groundwater sampling data from MW-1, MW-3F, MW-6F, MW-12S, MW-13, MW-73, MW-74, MW-75 and MW-79A is used to assess groundwater quality downgradient of the Lenox facility. Unfiltered and filtered samples from these wells were analyzed for lead and zinc. The groundwater analytical results are summarized in Table 1, Section 7. The laboratory data reports are included in Appendix C.

The July 2005 results for the Classification Exception Area (CEA) monitoring program are summarized below:

- Lead concentrations in the unfiltered samples ranged from less than the laboratory reporting limit of 3.0 µg/l to 26.2 µg/l (MW-73). Lead concentrations in the filtered samples ranged from less than the laboratory reporting limit of 3.0 µg/l to 7.3 µg/l (MW-73).

- Zinc concentrations in the unfiltered samples ranged from less than the laboratory reporting limit of 20 µg/l to 70.7 µg/l (MW-73). Zinc concentrations in the filtered samples ranged from less than the laboratory reporting limit of 20 µg/l to 42.3 µg/l (MW-73).

- TCE concentrations in all monitoring wells, as summarized in Table 1, Section 5, ranged from less than the laboratory reporting limit of 0.20 µg/l to 6.4 µg/l, with the highest concentration in the sample from well MW-12D. TCE concentrations in the sentinel wells along the White Horse Pike ranged from less than the 0.15 µg/l laboratory reporting limit in well MW-75 to 4.0 µg/l in well MW-79A.

In accordance with the CEA monitoring program, the sentinel well TCE monitoring data collected during the past eight consecutive quarters was statistically analyzed using the Mann-Whitney U-Test. The results are summarized in Table 2, Section 7. The null hypothesis was accepted at the 90 percent confidence level (U>3) for all five wells: MW-75, MW-76, MW-77,

MW-78 and MW-79A, indicating that TCE concentrations at these wells have statistically remained the same or increased over the past eight monitoring periods. MW-75 has not contained any detectable concentrations of TCE for the past twenty-four consecutive quarters.

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TABLE 1 SECTION 7

CEA GROUNDWATER MONITORING RESULTS, JULY 2005

Well No.	MW-1		MW-3F		MW-6F		MW-12S		MW-13	
Date Sampled	7/18/05		7/22/05		7/22/05		7/21/05		7/21/05	
Lead (Unfiltered)	<3.0	✓	4.6	✓	3.6	✓	3.8	✓	<3.0	✓
Lead (Filtered)	<3.0	✓	3.5	✓	<3.0	✓	<3.0	✓	<3.0	✓
Zinc (Unfiltered)	<20	✓	<20	✓	<20	✓	<20	✓	<20	✓
Zinc (Filtered)	<20	✓	<20	✓	<20	✓	<20	✓	31.9	✓

Well No.	MW-73		MW-74		MW-75		MW-79A	
Date Sampled	7/22/05		7/22/05		7/21/05		7/21/05	
Lead (Unfiltered)	**26.2**	✓	**15.7**	✓	7.8	✓	3.1	✓
Lead (Filtered)	7.3	✓	<3.0	✓	<3.0	✓	<3.0	✓
Zinc (Unfiltered)	**70.7**	✓	**58.5**	✓	<20	✓	<20	✓
Zinc (Filtered)	**42.3**	✓	26.3	✓	<20	✓	<20	✓

Notes:
All concentrations presented in micrograms per liter (µg/l).
Values in **bold** exceed the site specific Groundwater Quality Criteria for Lead (10 µg/l) and Zinc (36.7 µg/l).

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TABLE 2 SECTION 7

MANN-WHITNEY STATISTICAL TEST SUMMARY

Sentinel Well	Eighth Quarter Ending Date					
	Apr-05			Jul-05		
	Ua	Ub	U	Ua	Ub	U
MW-75	16	0	8	16	0	8
MW-76	14	11	12.5	12	8	10
MW-77	-	-	15	16	-	16
MW-78	-	-	16	16	-	16
MW-79A	13	12	12.5	10	-	10

Notes:

Null hypothesis will be accepted at the 90% confidence level when the calculated U value is greater than 3.

If two or more concentrations are identical the test is calculated twice, once ranking the identical "a" concentrations first (Ua) and once ranking the "b" concentrations first (Ub). The average of these values is the actual "U". (N.J.A.C. 7:26 E App. C)

8.0 RESIDENTIAL WELL SAMPLING

Following discussions with NJDEP and USEPA in 2001, Lenox agreed to develop and coordinate a sampling program with the Atlantic County Department of Public Health (ACDPH) to assess and track TCE and breakdown product concentrations at residential wells located downgradient of the White Horse Pike (Route 30). Lenox initiated the sampling during the fourth quarter of 2001 at the first three homes immediately downgradient of the White Horse Pike that were not served by public water. A fourth residence was added in January 2003 and is included in the list below. In accordance with the plan developed by Lenox, the sampling results are provided to ACDPH, which in turn provides any significant data directly to the homeowners and the USEPA.

The residences covered by the current quarterly sampling program are shown on Figure 5 and are identified as follows:

- RESW-1, 360 S. Mannheim Avenue
- RESW-2, 357 S. Mannheim Avenue
- RESW-3, 353 S. Mannheim Avenue
- RESW-4, 344 S. Mannheim Avenue

Private wells at homes further north and west of Mannheim Avenue are not included in the sampling program due to their distance from White Horse Pike. The wells were sampled on April 20, 2005. Please note that RESW-3 was not sampled during this period. Repeated attempts were made to contact the homeowner but no response was obtained and no working sampling ports are available on the outside of the house. The residential well samples were analyzed using EPA method 524.2 for drinking water. A trip blank was included in the sample shipment and also analyzed using the same method. The current and historical sampling data is summarized in Tables 1 and 2, Section 8. Laboratory data reports are included in Appendix C. The second quarter monitoring results are summarized below:

- TCE was detected at a concentration of 0.43 J µg/l in RESW-1. TCE was not detected in the other samples at concentrations above the laboratory reporting limit. Cis-1,2-dichloroethane, a TCE breakdown product, was detected in the sample from RESW-1 at a concentration of 0.093 J µg/l. TCE breakdown products were not detected in any other samples at concentrations exceeding the laboratory reporting limits.

- Chloroform was detected in three samples at concentrations of 6.5 µg/l (RESW-1), 0.29 J µg/l (RESW-2) and 0.16 J µg/l (RESW-4). Chloroform is not considered a site-related compound.

- Methyl tert-butyl ether (MTBE) was detected in the samples from RESW-2 (0.46 J µg/l) and RESW-4 (1.2 µg/l). MTBE is not considered a site-related compound.

- Benzene and p-dichlorobenzene were detected in the sample from RESW-2 at concentrations of 0.31 J µg/l and 0.087 J µg/l, respectively. Benzene and p-dichlorobenzene are not considered to be site-related compounds.

- Carbon disulfide was detected in the samples from RESW-2 (0.24 J µg/l) and RESW-4 (0.089 J µg/l). Carbon disulfide was also detected in the trip blank (TB-2) at a concentration of 0.087 J µg/l. Carbon disulfide is not considered to be a site-related compound.

- No analytes other than carbon disulfide were detected in the trip blank at concentrations exceeding laboratory reporting limits.

The RESW-1 residence was connected to the municipal water supply system on August 20, 2002.

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TABLE 1 SECTION 8

RESIDENTIAL WELL SAMPLING RESULTS, JULY 22, 2005

Well ID	RESW-1	RESW-2	RESW-4	TB-2
Acetone	-	-	-	-
2-Butanone	-	-	-	-
Benzene	-	0.31 J ✓	-	-
Bromobenzene	-	-	-	-
Bromochloromethane	-	-	-	-
Bromodichloromethane	-	-	-	-
Bromoform	-	-	-	-
Bromomethane	-	-	-	-
n-Butylbenzene	-	-	-	-
sec-Butylbenzene	-	-	-	-
tert-Butylbenzene	-	-	-	-
Carbon disulfide	-	0.24 J ✓	0.089 J ✓	0.087 J ✓
Chlorobenzene	-	-	-	-
Chloroethane	-	-	-	-
Chloroform	6.5 ✓	0.29 J ✓	0.16 J ✓	-
Chloromethane	-	-	-	-
o-Chlorotoluene	-	-	-	-
p-Chlorotoluene	-	-	-	-
Carbon tetrachloride	-	-	-	-
1,1-Dichloroethane	-	-	-	-
1,1-Dichloroethene	-	-	-	-
1,1-Dichloropropene	-	-	-	-
1,2-Dibromo-3-chloropropane	-	-	-	-
1,2-Dibromoethane	-	-	-	-
1,2-Dichloroethane	-	-	-	-
1,2-Dichloropropane	-	-	-	-
1,3,-Dichloropropane	-	-	-	-
2,2-Dichloropropane	-	-	-	-
Dibromochloromethane	-	-	-	-
Dibromomethane	-	-	-	-
Dichlorodifluoromethane	-	-	-	-
Cis-1,3-Dichloropropene	-	-	-	-
m-Dichlorobenzene	-	-	-	-
o-Dichlorobenzene	-	-	-	-
p-Dichlorobenzene	-	0.087 J ✓	-	-
Trans-1,2-Dichloroethene	-	-	-	-
Cis-1,2,-Dichloroethene	0.093 J ✓	-	-	-
Trans-1,3-Dichloropropene	-	-	-	-
Ethylbenzene	-	-	-	-
Hexachlorobutadiene	-	-	-	-
Hexane	-	-	-	-
2-Hexanone	-	-	-	-
Isopropylbenzene	-	-	-	-
p-Isopropylbenzene	-	-	-	-
Methylene Chloride	-	-	-	-
Methyl Tert Butyl Ether	-	0.46 J ✓	1.2 ✓	-
4-Methyl-2-Pentanone	-	-	-	-
Naphthalene	-	-	-	-
n-Propylbenzene	-	-	-	-
Styrene	-	-	-	-
1,1,1,2-Tetrachloroethane	-	-	-	-
1,1,1-Trichloroethane	-	-	-	-
1,1,2,2-Tetrachloroethane	-	-	-	-
1,1,2-Trichloroethane	-	-	-	-
1,2,3-Trichlorobenzene	-	-	-	-
1,2,3-Trichloropropane	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	-
1,2,4-Trimethylbenzene	-	-	-	-
1,3,5-Trimethylbenzene	-	-	-	-
Toluene	-	-	-	-
Trichloroethene	0.43 J ✓	-	-	-
Trichlorofluoromethane	-	-	-	-
Vinyl Chloride	-	-	-	-
Xylenes, total	-	-	-	-

Notes: All concentrations presented in micrograms per liter (ug/l).
- = Parameter not detected above laboratory detection limit.
Residential samples and trip blank (TB-2) analyzed by EPA Method 524.2, Rev. 4.1

LENOX CHINA
POMONA, NEW JERSEY

TABLE 2 SECTION 8

HISTORICAL RESIDENTIAL WELL SAMPLING RESULTS THROUGH JULY 2005
(DETECTED COMPOUNDS ONLY)

Sample ID	Date	Acetone	Benzene	Carbon Disulfide	Chloro-form	Chloro-benzene	Cis-1,2-Dichloro ethene	m-Dichloro benzene	p-Dichloro benzene	Ethyl benzene	MTBE	Toluene	Trichloro ethene	Xylenes (total)
RESW-1	3/19/2002	-	-	-	5.0	-	-	-	-	-	-	-	**1.4**	-
	5/16/2002	-	-	-	3.6	-	-	-	-	-	-	-	**1.5**	-
	7/18/2002	-	-	-	4.1	-	-	-	-	-	-	-	**1.2**	-
	10/16/2002	-	-	-	4.2	-	-	-	-	-	0.29	-	0.88	-
	1/29/2003	-	-	-	6.6	-	-	-	-	-	-	-	-	-
	4/14/2003	-	-	-	4.9	-	-	-	-	-	-	-	0.56	-
	7/23/2003	-	-	-	5.5	-	-	-	-	-	-	-	**1.1**	-
	10/30/2003	-	-	-	7.9	-	-	-	-	-	-	-	0.53	-
	1/21/2004		-	-	6.5	-	-	-	-	-	-	-	0.54	-
	4/28/2004	-	-	-	7.2	-	-	-	-	-	-	-	0.65	-
	7/23/2004	-	-	-	6.6	-	-	-	-	-	1.4	-	0.39 J	-
	10/20/2004	-	-	-	8.5	-	-	-	-	-	0.19 J	-	0.21 J	-
	1/20/2005	6.6	-	-	6.6	-	-	-	-	0.16 J	0.70	0.065 J	0.50	0.62
	4/20/2005	-	-	-	6.8	-	0.11 J	-	-	-	-	-	0.52	-
	7/22/2005	-	-	-	6.5✓	-	0.093 J✓	-	-	-	-	-	0.43 J✓	-
RESW-2	3/19/2002	-	1.3	-	0.72	-	-	-	0.26	-	-	-	-	-
	5/16/2002	-	0.88	-	0.51	-	-	-	0.33	-	-	-	-	-
	7/18/2002	-	0.96	-	0.38	-	-	-	0.38	-	-	-	-	-
	10/16/2002	-	1.4	-	0.29	-	-	0.071	0.33	-	-	-	-	-
	1/29/2003	-	1.4	-	0.25 J	-	-	-	0.26 J	-	-	-	-	-
	4/14/2003	-	1.4	-	0.28 J	0.098 J	-	0.10 J	0.52	-	-	-	-	-
	7/23/2003	-	0.78	-	-	-	-	-	-	-	-	-	-	-
	10/30/2003	-	0.52	-	0.68	-	-	-	0.31 J	-	-	-	-	-
	1/21/2004	-	0.60	-	0.49 J	-	-	-	-	-	-	-	-	-
	4/28/2004	-	0.55	1.2	0.52	-	-	-	-	-	-	-	-	-
	7/23/2004	-	0.29 J	-	0.52	-	-	-	-	-	0.20 J	-	-	-
	10/20/2004	-	0.22 J	-	0.40 J	-	-	-	0.14 J	-	-	-	-	-
	1/20/2005	-	0.30 J	-	0.29 J	-	-	-	0.099 J	-	0.088 J	-	-	-
	4/20/2005	-	0.24 J	-	0.39 J	-	-	-	0.19 J	-	-	-	-	-
	7/22/2005	-	0.31 J✓	0.24 J✓	0.29 J✓	-	-	-	0.087 J✓	-	0.46 J✓	-	-	-

Notes:

All concentrations presented in micrograms per liter (ug/l).

- = Not detected above laboratory detection limit.

J = Estimated concentration. NS = Not sampled.

Values in **bold** font exceed the site specific Groundwater Quality Criteria for TCE (1.0 ug/l).

Table 2, Section 8 Continued...

Sample ID	Date	Acetone	Benzene	Carbon Disulfide	Chloroform	Chloro benzene	Cis-1,2-Dichloro ethene	m-Dichloro benzene	p-Dichloro benzene	Ethyl benzene	MTBE	Toluene	Trichloro ethene	Xylenes (total)
RESW-3	3/19/2002	-	-	-	3.1	-	-	-	-	-	-	-	-	-
	6/4/2002	-	-	-	2.7	-	-	-	-	-	-	-	-	-
	7/18/2002	-	-	-	2.6	-	-	-	-	-	-	-	-	-
	10/16/2002	-	-	-	2.4	-	-	-	-	-	-	-	-	-
	1/29/2003	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/16/2003	-	-	-	2.4	-	-	-	-	-	-	-	-	-
	7/23/2003	-	-	-	2.9	-	-	-	-	-	-	-	-	-
	10/30/2003	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/21/2004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/28/2004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/23/2004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/20/2004	-	-	-	1.9	-	-	-	-	-	-	-	-	-
	1/20/2005	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/20/2005	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/22/2005	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
RESW-4	1/29/2003	-	-	-	0.29 J	-	-	-	-	-	1.3	-	-	-
	4/14/2003	-	-	-	0.22 J	-	-	-	-	-	1.3	-	-	-
	7/23/2003	-	-	-	-	-	-	-	-	-	1.7	-	-	-
	10/30/2003	-	-	-	-	-	-	-	-	-	2.3	-	-	-
	1/21/2004	-	-	-	-	-	-	-	-	-	1.8	-	-	-
	4/28/2004	-	-	-	-	-	-	-	-	-	2.3	-	-	-
	7/23/2004	-	-	-	-	-	-	-	-	-	2.6	-	-	-
	10/20/2004	-	-	-	-	-	-	-	-	-	1.9	-	-	-
	1/20/2005	-	-	-	0.15 J	-	-	-	-	-	1.7	-	-	-
	4/20/2005	-	-	-	0.14 J	-	-	-	-	-	1.4	-	-	-
	7/22/2005	-	-	0.089 J	0.16 J	-	-	-	-	-	1.2	-	-	-

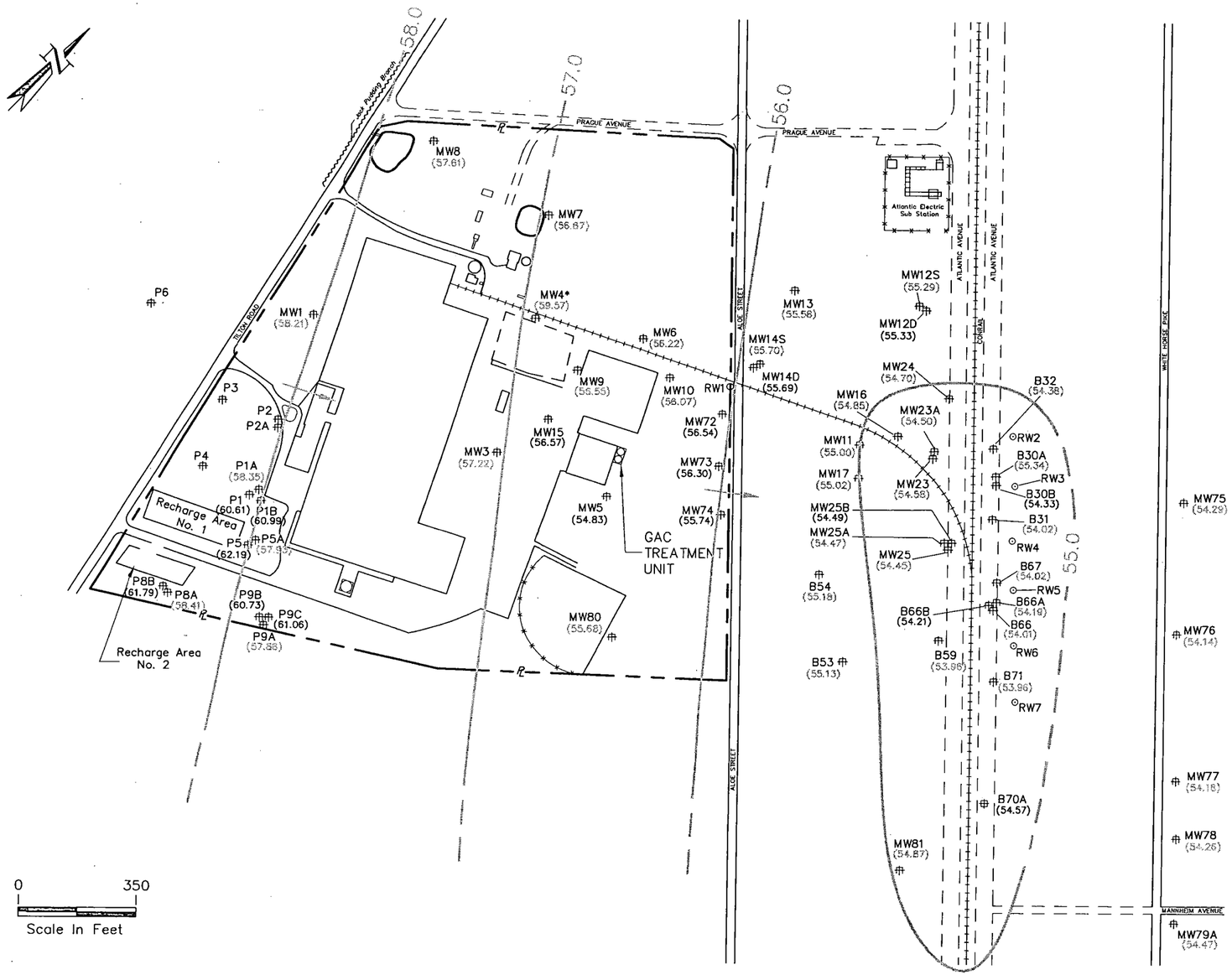
Notes:

All concentrations presented in micrograms per liter (ug/l).

- = Not detected above laboratory detection limit.

J = Estimated concentration. NS = Not sampled.

Values in **bold** font exceed the site specific Groundwater Quality Criteria for TCE (1.0 ug/l).



LEGEND

- B66 (54.01) ⊕ — *Location Of Monitoring Well With Groundwater Elevation In Feet Above MSL*
- RW5 ⊙ — *Location Of Recovery Well*
- 56.0 —— — *Line Of Equal Water Level Elevation In Feet Above MSL (Dashed Where Inferred)*
- ——◄ — *Groundwater Flow Direction*

NOTES:

* – *Anomalous reading consistent with previous measurements*

Contour lines developed using data from wells screened in same water bearing zone as recovery wells (indicated in color).

FIGURE NO: 1 GROUNDWATER FLOW MAP, JULY 18, 2005
LENOX CHINA
POMONA, NEW JERSEY

Source: Base Map Obtained From Geraghty & Miller's August 1992 Groundwater Monitoring Report

Gannett Fleming
ENGINEERS AND PLANNERS
PRINCETON, NEW JERSEY

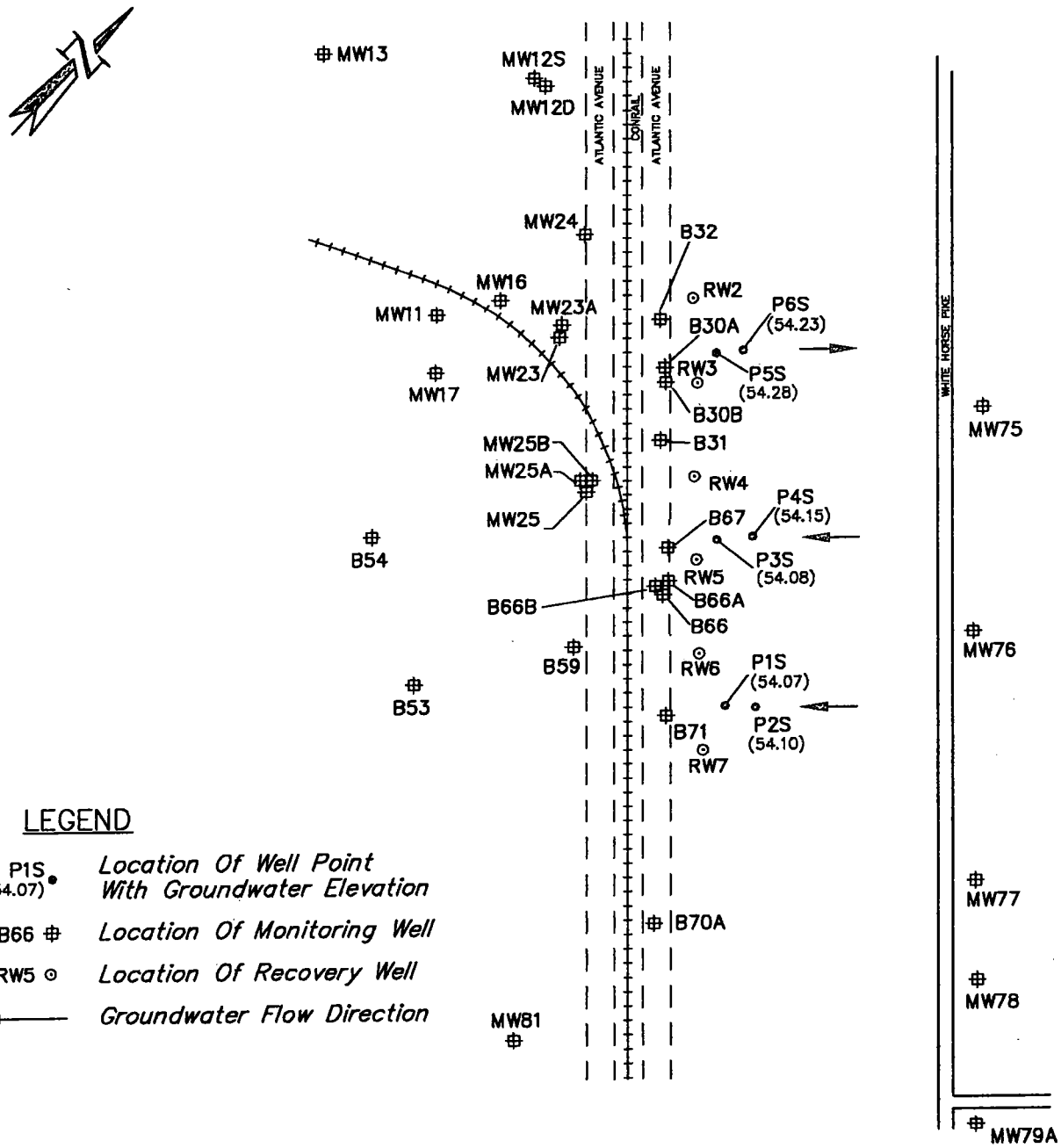


FIGURE NO: 2 GROUNDWATER FLOW MAP, SHALLOW WELLS JULY 18, 2005

LENOX CHINA
POMONA, NEW JERSEY

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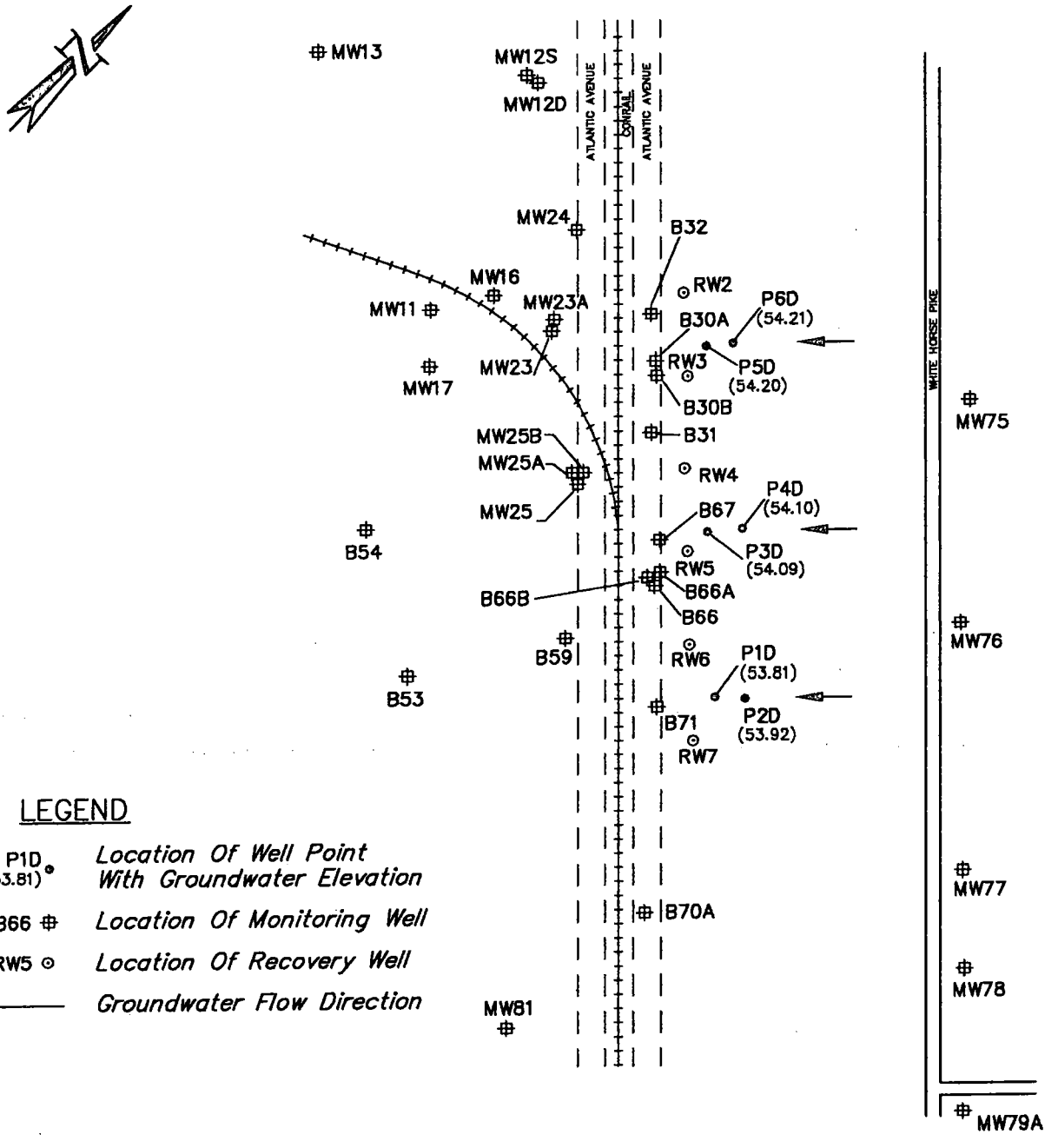

LEGEND

P1D (53.81)	*Location Of Well Point With Groundwater Elevation*
B66	*Location Of Monitoring Well*
RW5	*Location Of Recovery Well*
←	*Groundwater Flow Direction*

NOTE:

Base Map Obtained From Geraghty & Miller's August 1992 Groundwater Monitoring Report.

0 300

Scale In Feet

FIGURE NO: 3 GROUNDWATER FLOW MAP, DEEP WELLS JULY 18, 2005

LENOX CHINA
POMONA, NEW JERSEY

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PRINCETON, NEW JERSEY

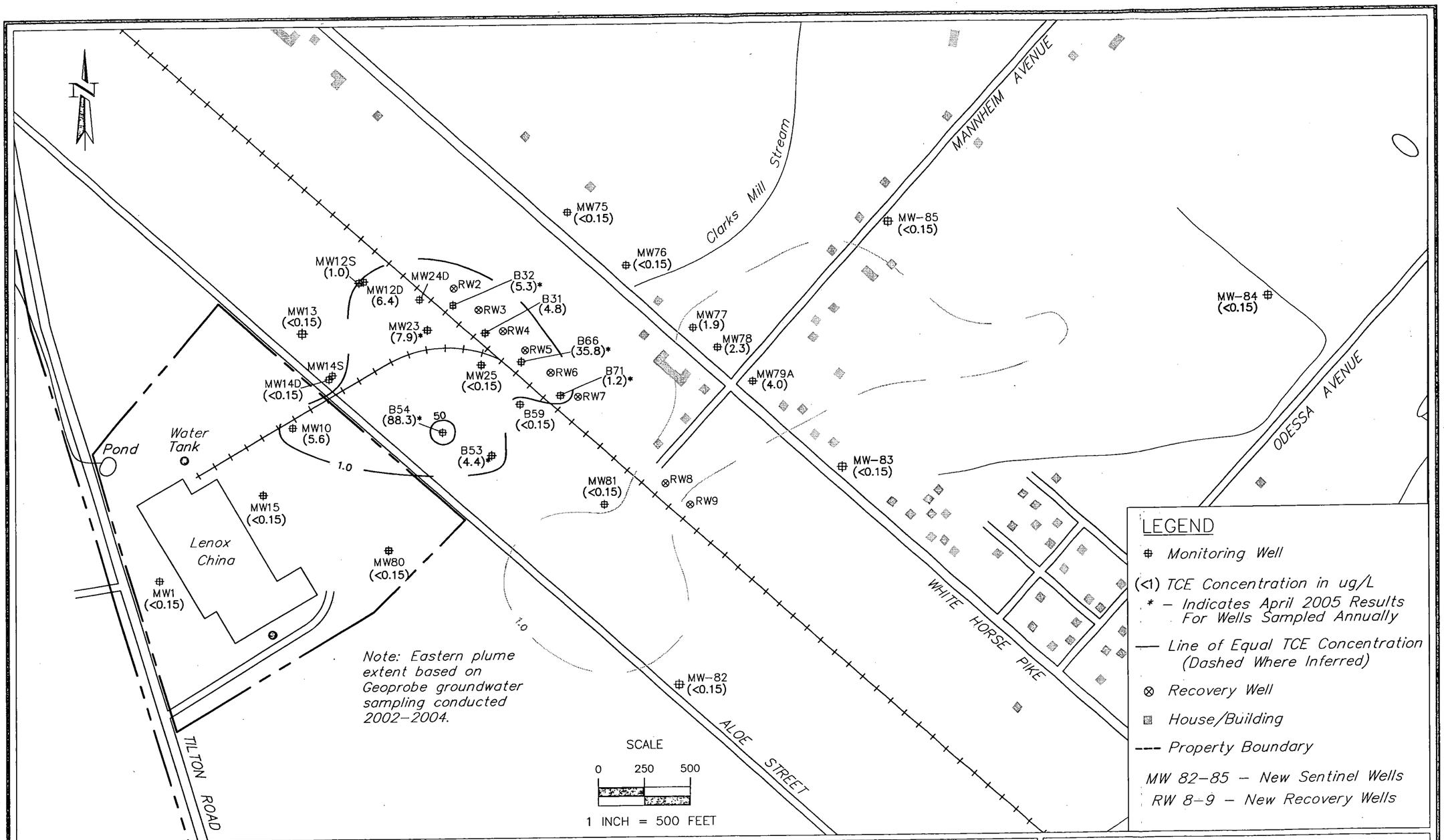

FIGURE NO: 4 EXTENT OF TRICHLOROETHENE IN GROUNDWATER, JULY - AUGUST 2005

LENOX CHINA
POMONA, NEW JERSEY

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PRINCETON, NEW JERSEY

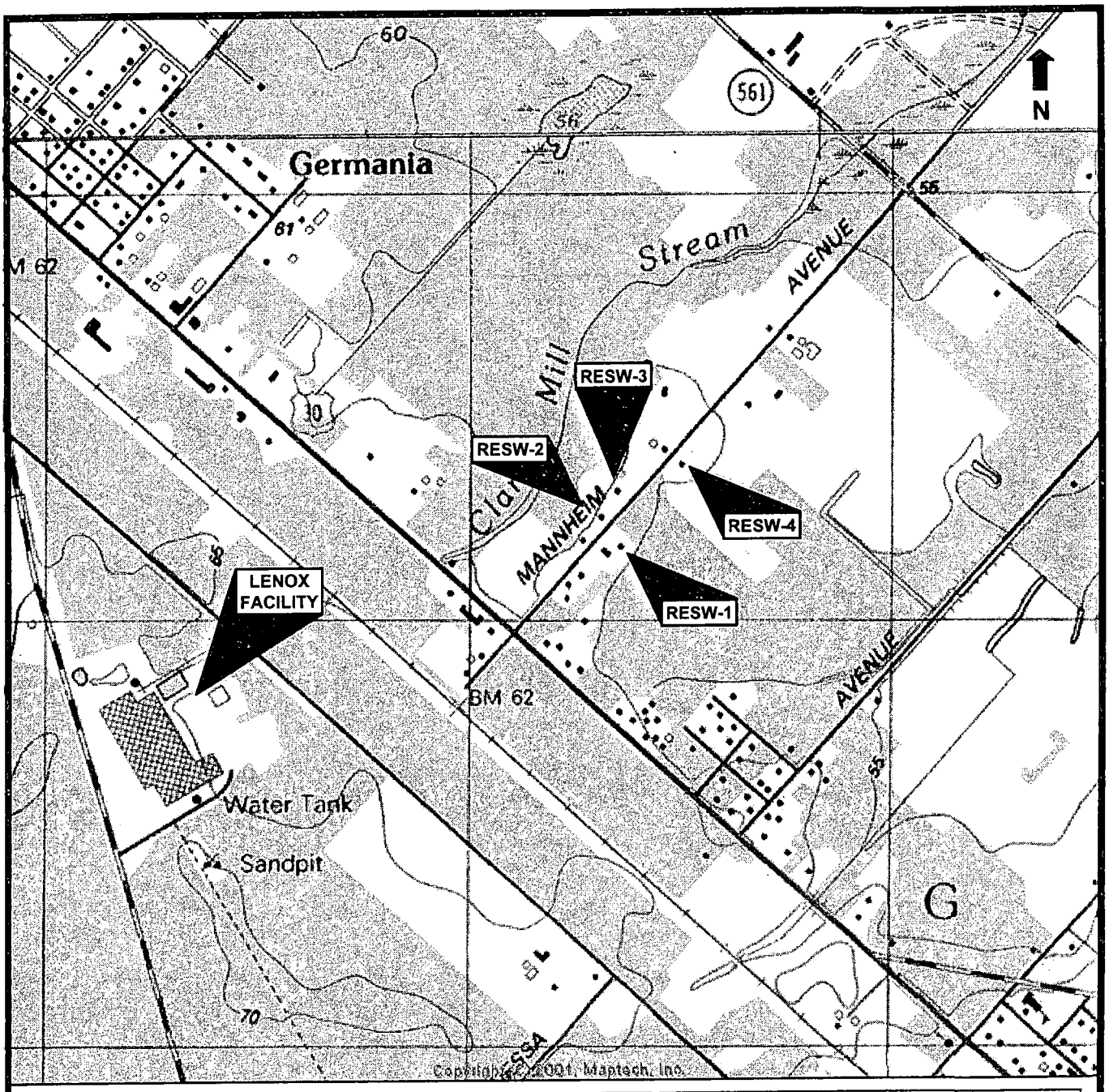

FIGURE NO: 5
RESIDENTIAL WELL SAMPLING LOCATIONS
LENOX CHINA
POMONA, NEW JERSEY

Approximate Scale: 1 inch = 1,200 feet

Source Map: USGS 7.5 Minute Series, Topo Map - Pleasantville, NJ 1989

Gannett Fleming
ENGINEERS AND PLANNERS
PRINCETON, NEW JERSEY

APPENDIX B

CONTOUR MAP REPORT FORM

JULY 18, 2005

Project No.: 43838.021 Project Name: Lenox China, Pomona: TCE Monitoring

Drawing Description: Groundwater Flow Map, July 18, 2005

Contour Map Reporting Form

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary.

1. Did any surveyed well casing elevations change from the previous sampling events? Yes ☐ No ☒

   If yes, attach new "Well Certification - Form B" and identify the reason for the elevation Change (damage to casing, installation of recovery system in monitoring well, etc.)

   ———

2. Are there any monitoring wells in unconfined aquifers in which the water table elevation is higher than the top of the well screen? Yes ☒ No ☐

   If yes, identify these wells.
   P-1A, P-5A, P-8A, P-9A, MW-3, MW-6, MW-9, MW-10, MW-11, MW-12S, MW-13, MW-14S, MW-16, MW-17, MW-23, MW-23A, MW-24, MW-25, MW-25A, B30A, MW-75, MW-76, MW-77, MW-78, MW-79A, B-31, B-32, B-53, B-54, B-59, B-66, B-66A, B-67, B-71

3. Are there any monitoring wells present at the site but omitted from the contour map? Yes ☒ No ☐

   Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

   Wells omitted from the map are screened in a shallower or deeper groundwater interval than that screened by the recovery well system.

4. Are there any monitoring wells containing separate phase product during this measuring event? Yes ☐ No ☒
   Were any of the monitoring wells with separate phase product included in the ground water contour map? Yes ☐ No ☒

   If yes, show the formula used to correct the water table elevation.

   ———

Project No.: 43838.021 Project Name: Lenox China, Pomona: TCE Monitoring

Drawing Description: Groundwater Flow Map, July 18, 2005

5. Has the ground water flow direction changed more than 45° from the previous groundwater contour map? Yes ☐ No ☒

   If yes, discuss reason for change.

6. Has ground water mounding and/or depressions been identified in the ground water contour map? Yes ☒ No ☐

   Unless the ground water mound and/or depressions are caused by the ground water remediation system, discuss the reasons for this occurrence.

7. Are the wells used in the contour map screened in the same water-bearing zone? Yes ☒ No ☐

   If no, justify inclusion of those wells.

   _____
   _____
   _____
   _____

8. Were the ground water contours
   ☐ computer generated,
   ☐ computer aided, or
   ☒ hand drawn?

   If computer aided or generated, identify the interpolation method(s) used.

   _____
   _____
   _____
   _____

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

CN 029
Trenton, New Jersey 08625-029

SAMPLE COLLECTION AND PRESERVATION FORM

(To be completed by sampling crew)

BACKGROUND

1) Facility Name: Lenox China

2) NJPDES Number: NJ0086487

3) Facility Address: Tilton Road, Pomona, NJ 08240

4) Owner's Name: Lenox China

5) Owner's Address: Tilton Road, Pomona, NJ 08240

SAMPLING PLAN

6) Has a sampling and analysis plan been developed for this facility as stipulated under N.J.A.C. 7:14A-6.9?
Yes X or No

7) If yes, has the sampling plan been approved by the Department?
Yes X or No

8) If the sampling plan has not been submitted to the Department, attach with these submitted forms.

SAMPLE COLLECTION

9) Sample Date/Time: 7/18/2005

10) Sampling Personnel (Name/Title)	Affiliation	Phone
Robyn Myhre, Hydrogeologist	Gannett Fleming, Inc.	609-279-9140
Marty Hughes, Environmental Scientist	Gannett Fleming, Inc.	609-279-9140

11) Weather conditions at the time of sampling: Sunny, 85 degrees F

12) Is there a designated level of protection, and if so, indicate:
A_____ B_____ C_____ or D X

STATIC WATER LEVEL MEASUREMENT AND WELL EVACUATION

13) What method was utilized to determine the static water level?
Electrical (m-scope) X Stainless Steel Tape _____
Sonic _____ or Other _____: (explain) _____

14) Measuring Device Precise to: 0.01 feet

15) Model Number: 101 Manufacturer: Solinst

16) Was the water level indicator deconned between wells?
Yes X or No_____

17) Describe the decontamination procedure: Deionized water rinse, wipe with paper towel, final deionized water rinse, air dry

18) Wells are to be purged three to five times prior to sampling. If wells are not purged as stated above, explain and justify the exact purge method used.
N/A

19) Method used for well evacuation: Pump X or Bailer_____

20) If bailed to evacuate, what are the dimensions of the bailer?
N/A

21) What is the volume capacity of the bailer? N/A

22) Pump Type: Submersible_____ Bladder_____ Gas Piston_____
Gas Displacement_____ or Other X
Explain: Peristaltic Pump

23) Pump Model Number / Flow Rate: Randolph Pump Model 750/1-6 gpm

24) Pump manufacturer: Randolph-Austin

25) Describe decontamination method used to clean pump between wells:
None - A new piece of tubing was used at each monitoring well

26) Power source for pump: Gasoline Powered generator_____
Gasoline Powered compressor___Propane Powered Engine__X____

27) Was the gasoline transported in the same vehicle as the sample bottles, field and trip blanks, or bailers?
Yes_____ or No__X___

28) Refer to the following chart for volume capacities for various wells per linear foot.

Casing Diameter	Gallons/Linear Foot
2"	0.16
4"	0.65
6"	1.47
8"	2.61

29) Complete the below chart regarding evacuation measurements. Please note the following abbreviations: TOC=elevation of top of casing; TDW=total depth of well from from top of casing; DTW=distance to water from top of casing; # of bail vols=number of bail volumes. TOC, DTW, and TDW Should be measured and/or calculated to the nearest 0.01 foot. Also note that if a mechanical pump is used for purging, indicate the total minutes of pumping time below. If a bailer is used for purging, indicate the total number of bail volumes. Attach additional sheets if necessary.

SEE TABLE QAQC1 ON PAGE 3A

Well Permit No./Owners Well No.	TOC	DTW	TOC-DTW	TDW	gal. / Lin. ft.	Amount of H2O in Casing	Amount of H2O Purged	# of Bail Vols	Minutes pumping time	Time purge comp-lete	Time Sample Col-lected

Table QAQC1
State of New Jersey
Department of Environmental Protection
Division of Water Resources
Groundwater Sampling Data Collected July 18, 2005

Well Permit Number	Owners Well Number	TOC (Feet)	DTW (Feet)	TOC-DTW (Feet)	TDW (Feet)	Gallons per linear foot	Amount of Water in Casing (gallons)	Amount of Water Purged (gallons)	Number of Bail Volumes	Minutes pumping time	Time purge completed	Time sample collected
36-03025-2	MW-1	69.28	11.07	58.21	29.75	0.65	12.1	40	-	20	16:08	16:08
36-03027-9	MW-3	67.09	9.87	57.22	30.40	0.65	13.3	40	-	14	14:05	14:05
36-03119-4	MW-4	66.98	7.41	59.57	26.80	0.65	12.6	40	-	17	15:04	15:04
36-02913-0	MW-5	64.17	9.34	54.83	17.95	-	-	Not Sampled	-	-	-	-
36-03270-1	MW-6	65.08	8.86	56.22	30.75	0.65	14.2	45	-	19	16:43	16:43
36-07160-9	MW-9	69.51	12.96	56.55	31.15	0.65	11.8	40	-	20	14:34	14:34
36-07161-7	MW-10	63.51	7.44	56.07	29.30	0.65	14.2	45	-	17	17:07	17:07

SAMPLE COLLECTION AND PRESERVATION

30) Matrices Sampled:
Aqueous: Potable Well_____ Monitoring Well__X__
Surface Water_____ Leachate_____ Other_____
Nonaqueous: Soil_____ Sediment_____ Other_____

31) Dedicated Hose: Yes__X__ or No_____

32) Hose Construction: PVC_____ Teflon_____ Tygon_____
Butyl_____ Other__X__ Explain: Drinking water grade polyethylene

33) Sample Collection: (Time of collection for each well/sample should be indicated on the back of this page) See table QAQC1 on page 3A
A) Bailer-construction: Teflon_____ Stainless Steel_____
PVC_____ HDPE _X__
B) Beacon Bomb Sampler_____ Size:_____oz.
C) Other_____ Explain:_____
_____

34) Lines used to lower bailer: Stainless Steel_____
Cable/Leader_____ Teflon_____ PVC Rope_____ Other 100% poly

35) Are dedicated bailers used for each well? Yes__X__ or No____

36) Are bailers: Laboratory cleaned_____ Laboratory Name_____
Field Cleaned_____ Describe method:_____
Disposable bailers used only once then discarded.
_____

37) Prior to use, are bailers, sample bottles, hoses, etc. Kept clean i.e., not placed in direct contact with ground, etc.:
Yes__X__ or No_____

38) Are sample bottles supplied by laboratory? Yes__X__ or No____

39) Are sample preservation instructions supplied by laboratory?
Yes__X__ or No_____

40) Are sample preservatives supplied by laboratory? Yes__X__ or No_____

41) Sample Preservation:

Constituent	Teflon top in contact with sample	Head Space	Refrig-erated	Acidified	Alkanized	Bottles
Volatile Organics	Yes	No	Yes	Yes	N/A	N/A
TOX	N/A	N/A	N/A	N/A	N/A	N/A
Extractable Organics	N/A	N/A	N/A	N/A	N/A	N/A
Metals	N/A	N/A	Yes	Yes	N/A	N/A
Cyanide	N/A	N/A	N/A	N/A	N/A	N/A
Phenols	N/A	N/A	N/A	N/A	N/A	N/A
Biological	N/A	N/A	N/A	N/A	N/A	N/A

42) Indicate below any other constituents to be analyzed and their forms of preservation: TDS, TSS, color – refrigerated

43) Were samples for metals analysis filtered in field? Yes X or No_____

44) Were samples for metals analysis filtered in laboratory? Yes_____ or No X

45) Were field blanks taken? Yes X or No_____

46) Were trip blanks taken? Yes X or No_____

47) What parameters/analysis were performed on field and trip blanks? Volatile Organics X (FB,TB) Semi-volatile_____ Pesticides_____ PCBs_____ Metals X (FB) Other TDS, TSS, color (FB)

48) Prior to sampling, was an equipment blank performed? Yes_____ No X Sampling equipment is dedicated per well.

49) Prior to sampling each well, are disposable gloves worn? Yes X or No_____

50) If yes, are the gloves changed between wells? Yes X or No_____

CHAIN OF CUSTODY

51) Laboratory Name/Certification Number Accutest / 12129

52) Laboratory Address 2235 Route 130, Dayton, New Jersey 08810

53) Laboratory receipt date and time 7/19/05, 10:00

54) Attach Chain of Custody: Yes X or No

Sample Number	Relinquished by	Received by	Time	Date	Reason for change of custody
MW-1, MW-3, MW-4, MW-6, MW-9, MW-10, MW-2, FB, TB	R. Myhre	Accutest courier	10:00	7/19/05	Relinquished to lab

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information contained in this report, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete and meets the description specified in N.J.A.C. 7:14A-2.5(a)10, and 6.1 through 6.12. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Sampler

Name/Title (printed) Robyn Myhre, Hydrogeologist

Signature Robyn Myhre Date: 7-29-05

Company Name and Address Gannett Fleming, 202 Wall Street, Princeton, NJ 08540

Notes:

1. The sampling team may use their own reporting forms only if the forms contain all the information required in this sample collection and preservation form.

2. If any of the items within this sample collection and preservation form vary for different monitor wells, the information must be documented within this form or as attachments to this form.

J4497

LABORATORY SAMPLE CHAIN OF CUSTODY/CHRONICLE FOR NJPDES COMPLIANCE MONITORING

Relinquisher of sample: (please print)

Name: Robyn Myhre Signature: Robyn Myh

Company: Gannett Fleming, Inc.

Title: Hydrogeologist

Date: 7-19-05 Time: 10:00

Laboratory sample recipient: (please print)

Name: CRAIG PARILLO Signature: Craig Pb

Laboratory Name: ACCUTEST

NJDEP Laboratory Cert. No. 12129 Title: Sen. Tech.

Date: 7/19/05 Time: 1200

Did samples arrive cold? Yes ✓ or No ___

Were the samples properly preserved? Yes ✓ or No ___

If no, which analyses will be affected: ___

Did sample for the analyses of volatile organics contain headspace? Yes ___ or No ✓

Was the septum in place with the TFE side down? Yes ✓ No ___

J4497

Sample Preparation Chemist

	Name please print	Signature	Date
1. Base/Neutrals			
2. Acids			
3. Pesticides			
4. Herbicides			
5. PCB's			
6. Metals			
7. Other			
8. Other			
9. Other			

Analyst

	Name please print	Signature	Date
1. Base/Neutrals			
2. Acids			
3. Pesticides			
4. Herbicides			
5. PCB's			
6. Metals			
7. Volatiles	Erin Ann Gaus	[illegible] signed for Erin	8/12/05
8. TOC			
9. TOX			
10. Phenols (total)			
11. Cyanide (total)			
12. Other			
13. Other			
14. Other			
15. Other			

J4497

Sample Preparation Chemist

	Name please print	Signature	Date
1. Base/Neutrals			
2. Acids			
3. Pesticides			
4. Herbicides			
5. PCB's			
6. Metals	Wally Pimentel	Wally Pimentel	7/27/05
7. Other			
8. Other			
9. Other			

Analyst

	Name please print	Signature	Date
1. Base/Neutrals			
2. Acids			
3. Pesticides			
4. Herbicides			
5. PCB's			
6. Metals	Latha Haran	[signature]	8/6/05
7. Volatiles			
8. TOC			
9. TOX			
10. Phenols (total)			
11. Cyanide (total)			
12. Other			
13. Other			
14. Other			
15. Other			

J4497

Sample Preparation Chemist

	Name please print	Signature	Date
1. Base/Neutrals			
2. Acids			
3. Pesticides			
4. Herbicides			
5. PCB's			
6. Metals			
7. Other			
8. Other			
9. Other			

Analyst

	Name please print	Signature	Date
1. Base/Neutrals			
2. Acids			
3. Pesticides			
4. Herbicides			
5. PCB's			
6. Metals			
7. Volatiles			
8. TOC			
9. TOX			
10. Phenols (total)			
11. Cyanide (total)			
12. Other (COL)	ADP Aruna Pachihara	Aruna Pachihara	8/11/05
13. Other (TDS)	JH Jasmine Heddish	Jasmine Heddish	8/11/05
14. Other (TSS)	JH Jasmine Heddish	Jasmine Heddish	8/11/05

Did any of the sample extractions and/or analyses exceed holding times? Yes____ No__✓__

If yes, which analyses will be affected:

_____
_____
_____

If re-extraction and/or re-analysis is necessary, indicate the reason and attach another Laboratory Chain of Custody/Chronicle with the appropriate signatures and dates.

Quality Assurance Officer

Name (please print)	Signature	Date
GREGORY TOMKOVICH	Gregory Tomkovich	8/10/05

LABORATORY AUTHENTICATION STATEMENT FOR NJPDES COMPLIANCE MONITORING

I certify under penalty of law, where applicable, this laboratory meets the Laboratory Performance Standards and Quality control requirements specified in N.J.A.C. 7:18, 40 CFR 136 for Water and Wastewater Analyses and SW 846 for Solid Waste Analyses. I have personally examined and am familiar with the information contained in this report, and that, based on my inquiry of those individuals immediately responsible for obtaining the information. I believe the submitted information is true, accurate, complete, and meets the standards specified in N.J.A.C. 7:18, 40 CFR 136, and/or SW 846. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

Laboratory Manager (as defined in N.J.A.C. 7:18)

CHAIN OF CUSTODY

ACCUTEST Laboratories

2235 Route 130, Dayton NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3488
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: J4497

Client / Reporting Information

Company Name: Gannett Fleming
Address: 202 Wall St.
City: Princeton State: NJ Zip: 08540
Project Contact: Robyn Myhre E-mail:
Phone #: 609-279-9140
Sampler's Name: Robyn Myhre

Project Information

Project Name: Lenox NJPDES
Street: Tilton Rd.
City: Pomona State: NJ
Project #: 43838.020
Fax #:
Client Purchase Order #:

Requested Analysis

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles	Total Pb/Zn	Dissolved Pb/Zn	Total Fe	Dissolved Fe	Color	TDS/TSS	VOC	LAB USE ONLY
-1F	MW-1		7/18/05	16:08	RM	GW	7	3 2 2	X	X	X	X	X	X	X	
-2F	MW-3			14:05			3	2 1	X	X			X			ME11
-3F	MW-4			15:04			3	2 1	X	X			X			WC20
-4F	MW-6			16:43			3	2 1	X	X			X			499A
-5F	MW-9			14:34			3	2 1	X	X			X			
-6F	MW-10			17:07			7	3 2 2	X	X	X	X	X	X	X	
-7F	MW-2			17:07		↓	7	3 2 2	X	X	X	X	X	X	X	
-8F	FB		↓	17:30		LQ	6	2 2 2	X	X	X	X	X	X	X	
-9	TB		7/18/05	—	↓	LQ	2	2							X	

Turnaround Time (Business Days)

- [x] Std. 15 Business Days — Approved By: / Date:
- [ ] 10 Day RUSH
- [ ] 6 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] Other

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [x] NJ Reduced
- [ ] NJ Full
- [ ] Other
- [ ] FULL CLP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format

Commercial "A" = Results Only

Comments / Remarks

GAQC Form B+C - Signatures

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time	Received by:	Relinquished by:	Date Time	Received by:
1 Robyn Myhre	7/19/05 10:00	1 D Dudek 7-19-05 1052	2 D Dudek	7-19-05	2 Craig 16
3	Date Time:	3	4	Date Time:	4
5	Date Time:	5	Custody Seal # #166	Preserved where applicable: FLD	On Ice: Cooler Temp: 3.0C

WELL SAMPLING LOG	Gannett Fleming 202 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)

I. General Information:

Client Name: Lenox China Pomona, NJ — **Project No.**: 43838.020

Project Name: NJPDES Quarterly Monitoring — **Sampled By**: RM/MH

Well No.: MW-1 — **Well Use:** Monitoring

Sample ID: MW-1 **Sample Date**: 7/18/05 **Sample Time**: 16:08

II. Well Information:

PID Reading: - — **Well Diameter**: 4 inches

Static Depth to Water: 11.07 ft. below m.p. — **Measuring Point (m.p.)**: PVC Casing

Total Well Depth: 29.75 ft. below m.p. — **Measuring Point (m.p.)**: PVC Casing

Δ h: 18.68 feet — **Volume of Standing Water:** 12.14 gallons

Volume to be removed: 36.42 gallons — **Actual Volume removed:** 40.00 gallons

III. Sampling Information:

Purging Method:

☒ Peristaltic Pump ☐ Submersible Pump

☐ Bailer ☐ Other _____

Well Drawdown/Recovery: ☒ Good ☐ Poor ☐ Other _____

Pump Flow Rate: 2.0 gpm **Purge Start:** 15:48 **Purge Time**: 20 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
15:53	10	5.13	.073	5.0	15.4
15:58	20	4.97	.075	5.6	15.1
16:03	30	4.99	.075	5.3	15.0
16:07	40	5.03	.075	6.0	14.9

Depth to water after purge: 11.67 ft. below m.p. **Time**: 16:08

Depth to water prior to sampling: 11.67 ft. below m.p. **Time**: 16:08

Sample Appearance: ☐ Turbid ☐ Slightly Turbid ☒ Clear ☐ Other _____

Sample Odor: ☒ None ☐ Other _____

IV. Sample Analyses:

Sample Parameters: Voc, Metals (Pb, Zn, Fe), Color, TDS/TSS

Metals: ☒ Filtered ☒ Unfiltered

Laboratory: Accutest **Date Shipped**: 7/19/05

WELL SAMPLING LOG	Gannett Fleming 202 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)

I. General Information:

Client Name: Lenox China Pomona, NJ

Project No.: 43838.020

Project Name: NJPDES Quarterly Monitoring

Sampled By: RM/MH

Well No.: MW-3

Well Use: Monitoring

Sample ID: MW-3 **Sample Date**: 7/18/05 **Sample Time**: 14:05

II. Well Information:

PID Reading: -

Well Diameter: 4 inches

Static Depth to Water: 9.87 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 30.40 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 20.53 feet

Volume of Standing Water: 13.34 gallons

Volume to be removed: 40.02 gallons

Actual Volume removed: 40.00 gallons

III. Sampling Information:

Purging Method:

☒ Peristaltic Pump ☐ Submersible Pump

☐ Bailer ☐ Other _____

Well Drawdown/Recovery: ☒ Good ☐ Poor ☐ Other _____

Pump Flow Rate: 2.9 gpm **Purge Start**: 13:51 **Purge Time**: 14 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
13:53	10	5.76	.467	4.4	20.5
13:56	20	5.84	.426	4.1	21.8
13:59	30	5.84	.445	6.3	21.6
14:04	40	5.76	.450	3.2	20.9

Depth to water after purge: 12.51 ft. below m.p. **Time**: 14:05

Depth to water prior to sampling: 12.51 ft. below m.p. **Time**: 14:05

Sample Appearance: ☐ Turbid ☐ Slightly Turbid ☒ Clear ☐ Other _____

Sample Odor: ☒ None ☐ Other _____

IV. Sample Analyses:

Sample Parameters: Metals (Pb, Zn), Color

Metals: ☒ Filtered ☒ Unfiltered

Laboratory: Accutest **Date Shipped**: 7/19/05

WELL SAMPLING LOG	Gannett Fleming 202 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)

I. General Information:

Client Name: Lenox China Pomona, NJ — **Project No.**: 43838.020

Project Name: NJPDES Quarterly Monitoring — **Sampled By**: RM/MH

Well No.: MW-4 — **Well Use:** Monitoring

Sample ID: MW-4 **Sample Date**: 7/18/05 **Sample Time**: 15:04 ✓

II. Well Information:

PID Reading: - — **Well Diameter**: 4 inches

Static Depth to Water: 7.41 ft. below m.p. — **Measuring Point (m.p.):** PVC Casing

Total Well Depth: 26.80 ft. below m.p. — **Measuring Point (m.p.):** PVC Casing

Δ h: 19.39 feet — **Volume of Standing Water:** 12.60 gallons

Volume to be removed: 37.80 gallons — **Actual Volume removed:** 40.00 gallons

III. Sampling Information:

Purging Method:

☒ Peristaltic Pump ☐ Submersible Pump

☐ Bailer ☐ Other _____

Well Drawdown/Recovery: ☒ Good ☐ Poor ☐ Other _____

Pump Flow Rate: 2.3 gpm **Purge Start:** 14:47 **Purge Time:** 17 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
14:51	10	5.66	.173	4.9	19.1
14:55	20	5.59	.188	4.5	20.6
14:59	30	5.55	.188	4.7	20.1
15:03	40	5.57	.186	5.1	20.9

Depth to water after purge: 8.35 ft. below m.p. **Time**: 15:04 ✓

Depth to water prior to sampling: 8.35 ft. below m.p. **Time**: 15:04

Sample Appearance: ☐ Turbid ☐ Slightly Turbid ☒ Clear ☐ Other _____

Sample Odor: ☒ None ☐ Other _____

IV. Sample Analyses:

Sample Parameters: Metals (Pb, Zn), Color

Metals: ☒ Filtered ☒ Unfiltered

Laboratory: Accutest **Date Shipped**: 7/19/05

WELL SAMPLING LOG	Gannett Fleming 202 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)

I. General Information:

Client Name: Lenox China Pomona, NJ — **Project No.**: 43838.020

Project Name: NJPDES Quarterly Monitoring — **Sampled By**: RM/MH

Well No.: MW-6 — **Well Use:** Monitoring

Sample ID: MW-6 **Sample Date**: 7/18/05 **Sample Time**: 16:43 ✓

II. Well Information:

PID Reading: - — **Well Diameter**: 4 inches

Static Depth to Water: 8.86 ✓ ft. below m.p. — **Measuring Point (m.p.):** PVC Casing

Total Well Depth: 30.75 ✓ ft. below m.p. — **Measuring Point (m.p.):** PVC Casing

Δ h: 21.89 ✓ feet — **Volume of Standing Water:** 14.23 gallons

Volume to be removed: 42.69 gallons — **Actual Volume removed:** 45.00 ✓ gallons

III. Sampling Information:

Purging Method:

☒ Peristaltic Pump ☐ Submersible Pump

☐ Bailer ☐ Other _____

Well Drawdown/Recovery: ☒ Good ☐ Poor ☐ Other _____

Pump Flow Rate: 2.4 gpm **Purge Start:** 16:24 **Purge Time**: 19 ✓ min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
16:28	10	4.23	.098	4.7	15.3
16:34	20	4.24	.131	7.3	15.2
16:37	30	4.26	.151	4.8	15.2
16:40	40	4.27	.160	4.7	15.2

Depth to water after purge: 9.33 ft. below m.p. **Time**: 16:43

Depth to water prior to sampling: 9.33 ft. below m.p. **Time**: 16:43 ✓

Sample Appearance: ☐ Turbid ☐ Slightly Turbid ☒ Clear ☐ Other _____

Sample Odor: ☒ None ☐ Other _____

IV. Sample Analyses:

Sample Parameters: Metals (Pb, Zn), Color

Metals: ☒ Filtered ☒ Unfiltered

Laboratory: Accutest **Date Shipped**: 7/19/05

WELL SAMPLING LOG	Gannett Fleming 202 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)

I. General Information:

Client Name: Lenox China Pomona, NJ — **Project No.**: 43838.020

Project Name: NJPDES Quarterly Monitoring — **Sampled By**: RM/MH

Well No.: MW-9 — **Well Use:** Monitoring

Sample ID: MW-9 **Sample Date**: 7/18/05 **Sample Time**: 14:34 ✓

II. Well Information:

PID Reading: - — **Well Diameter**: 4 inches

Static Depth to Water: 12.96 ft. below m.p. — **Measuring Point (m.p.):** PVC Casing

Total Well Depth: 31.15 ft. below m.p. — **Measuring Point (m.p.):** PVC Casing

Δ h: 18.19 feet — **Volume of Standing Water:** 11.82 gallons

Volume to be removed: 35.46 gallons — **Actual Volume removed:** 40.00 gallons

III. Sampling Information:

Purging Method:

☒ Peristaltic Pump ☐ Submersible Pump

☐ Bailer ☐ Other _____

Well Drawdown/Recovery: ☒ Good ☐ Poor ☐ Other _____

Pump Flow Rate: 2.0 gpm **Purge Start:** 14:14 **Purge Time**: 20 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
14:19	10	6.39	.324	0.5	16.5
14:24	20	5.92	.259	1.8	16.6
14:28	30	5.88	.241	2.0	16.4
14:33	40	5.84	.231	2.2	16.3

Depth to water after purge: 12.96 ft. below m.p. **Time**: 14:34

Depth to water prior to sampling: 12.96 ft. below m.p. **Time**: 14:34 ✓

Sample Appearance: ☐ Turbid ☐ Slightly Turbid ☒ Clear ☐ Other _____

Sample Odor: ☒ None ☐ Other _____

IV. Sample Analyses:

Sample Parameters: Metals (Pb, Zn), Color

Metals: ☒ Filtered ☒ Unfiltered

Laboratory: Accutest **Date Shipped**: 7/19/05

WELL SAMPLING LOG	Gannett Fleming 202 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)

I. General Information:

Client Name: Lenox China Pomona, NJ — **Project No.**: 43838.020

Project Name: NJPDES Quarterly Monitoring — **Sampled By**: RM/MH

Well No.: MW-10 — **Well Use:** Monitoring

Sample ID: MW-10/MW-2 **Sample Date**: 7/18/05 **Sample Time**: 17:07

II. Well Information:

PID Reading: - — **Well Diameter**: 4 inches

Static Depth to Water: 7.44 ft. below m.p. — **Measuring Point (m.p.)**: PVC Casing

Total Well Depth: 29.30 ft. below m.p. — **Measuring Point (m.p.)**: PVC Casing

Δ h: 21.86 feet — **Volume of Standing Water:** 14.21 gallons

Volume to be removed: 42.63 gallons — **Actual Volume removed:** 45.00 gallons

III. Sampling Information:

Purging Method:

☒ Peristaltic Pump ☐ Submersible Pump

☐ Bailer ☐ Other _____

Well Drawdown/Recovery: ☒ Good ☐ Poor ☐ Other _____

Pump Flow Rate: 2.6 gpm **Purge Start:** 16:50 **Purge Time:** 17 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
16:54	10	5.37	.313	1.6	16.6
16:57	20	5.36	.308	1.4	16.6
17:00	30	5.36	.302	2.9	16.6
17:04	40	5.35	.297	2.3	16.6

Depth to water after purge: 7.53 ft. below m.p. **Time**: 17:07

Depth to water prior to sampling: 7.53 ft. below m.p. **Time**: 17:07

Sample Appearance: ☐ Turbid ☐ Slightly Turbid ☒ Clear ☐ Other _____

Sample Odor: ☒ None ☐ Other _____

IV. Sample Analyses:

Sample Parameters: Vocs, Metals (Pb, Zn, Fe), Color, TDS/TSS

Metals: ☒ Filtered ☒ Unfiltered

Laboratory: Accutest **Date Shipped**: 7/19/05